THE OIL WEEKLY

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The Oil Man's Calendar

SEPT. 16–18	National Petroleum Association, Wm. Penn Hotel, Pittsburgh.
OCT. 2	AIME Regional Meeting, St. Louis.
8–10	Texas Mid-Continent Oil and Gas Association, Dallas, Texas.
12–14	American Society of Mechanical Engineers, Rochester, New York.
14–16	AIME, Petroleum Division, Los Angeles.
19	National Stripper Well Association, Wichita, Kansas.
19–21	Independent Petroleum Association, Wichita, Kansas.
27–29	National Safety Congress and Exposition, Chicago.
29–31	AIME Petroleum Division, Austin, Texas.
30–31	Illinois Mineral Industries Conference, Urbana.
NOV. 5–6	American Association of Petroleum Geologists, Los Angeles.
6	California Natural Gasoline Association, Los Angeles.
9–13	American Petroleum Institute, Palmer House, Chicago.
16–18	American Institute of Chemical Engineers, Netherlands Plaza Hotel, Cincinnati.
17–21	National Chemical Exposition, and Industrial Conference, American Chemical Society, Chicago.

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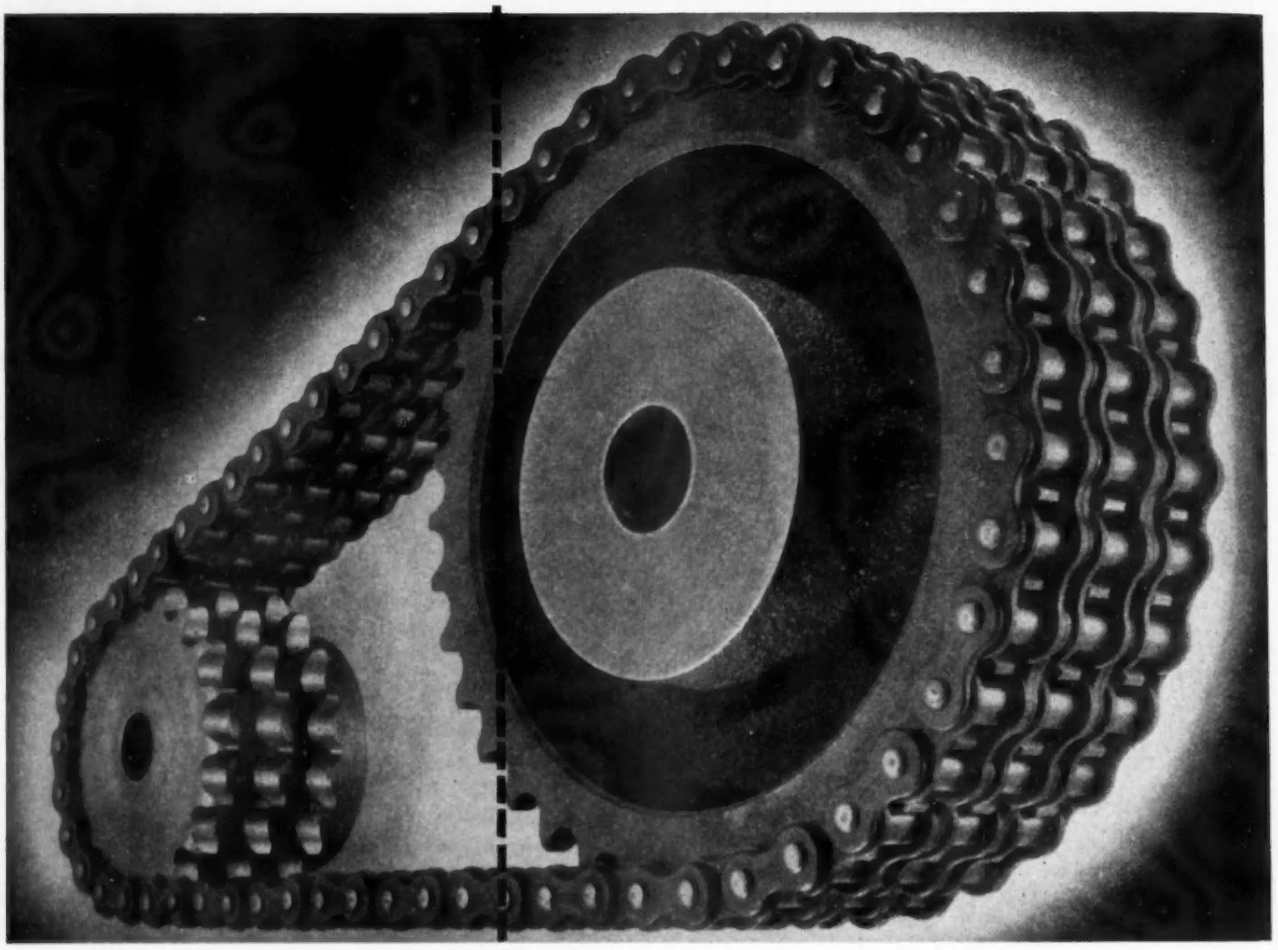

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The Changing Panorama

How Far Can You Ride a Good Horse?

BECAUSE it has been such a remarkably good horse for the designers of taxes, petroleum faces the danger of being ridden virtually to death by them.

Like almost every other session of Congress, this one has brought proposals for new taxes that would apply specifically to operations of the oil industry or sale of petroleum products, although in either case the levies ultimately would have to be paid by the already disproportionally taxed consumers of oils.

For the right to use petroleum, which is a modern necessity much more than a luxury, the people of the United States who do use it must pay 10 percent of the total taxes collected from all sources by the federal, state, and local governments.

That appears to be a high price for using a necessity, without further jacking up the taxes applicable to petroleum.

Gross tax collections from all sources by federal, state, and local governments for 1941 were approximately $17,500,000,000, excluding payroll taxes. That represented an unprecedented flow of revenues into public treasuries, in reflection of new defense taxes and exceptionally high rates of industrial and commercial activity. Despite the magnitude of that total taken in, 10.3 percent of it, or the sum of $1,807,146,000, came from taxes on the operations of the petroleum industry and sale of petroleum products.

The petroleum tax bill of 1941, more than double that of 1931, and 18.6 percent above that of 1940, was the greatest ever levied against the users of oil.

At the end of 1941, the nation-wide average gasoline tax was equivalent to a retail sales tax of 42 percent.

The federal, state, and local gasoline taxes accounted for $1,327,000,000 of the $1,807,146,000 total of taxes on petroleum in 1941. *The gasoline taxes collected by the states represented one fourth of all the tax revenues that they collected.*

The $1,807,146,000 in taxes levied on the petroleum industry and its products during 1941 substantially exceeded the total value of all the crude oil produced in the United States during the year. (The crude brought producers only about $1,587,000,000.)

Whereas the barrel of crude petroleum finally generated taxes in the amount of $1.29, the value of the crude itself at the well was only $1.13 a barrel.

When the proposal arises for further taxing petroleum, it should be recognized that petroleum already provides $1 against every $9 raised from all other sources.

"Believe it or not!"—The American Petroleum Institute has uncovered the startling fact that adding to all of the other petroleum shortages on the East Coast are the 2,000,000 dwelling units that are still dependent on kerosine or gasoline for household lighting. The plight of the gasoline-consuming motorist and the fuel-oil-burning home owner has overshadowed this other important use of petroleum products.

Synthetic Reaches Some Retreaders

THIOKOL synthetic rubber Type "N," widely publicized recently as the best possible solution to the civilian rubber shortage, is now in commercial production and an output of 125 tons is planned for August. This production is expected to provide enough retreading material to give retreaders an opportunity to familiarize themselves with processing the material while awaiting volume production.

It is estimated that 30,000 tons a year of this type of synthetic rubber would retread 12,000,000 tires and it is hoped that production will reach the required 2500 tons per month basis by the beginning of 1943.

However, officials point out that this accomplishment does not necessarily mean that an ample supply will be available for civilian use. First call for retreading material will, undoubtedly, be given to automobiles being used to transport war workers. Furthermore, technologists are speeding their investigations toward the end that these compounds might be so improved that they would offer a solution to the shortage of new material on Army and Navy vehicles and other military equipment. This latter development would automatically eliminate for months, if not years, the chance of the ordinary civilian obtaining Thiokol retreads.

Can Axis Choke Off Russian Oil Supply?

JUST as Germany has concentrated attack on the United States in the vital spot of oil transportation to the East, the arch-Axis power now is putting virtually everything possible into the design of disrupting the movement of oils by Russia from the Gronzy and Baku districts into the interior of the country.

Germany sorely needs the oil which lies temptingly in the Caucasus, and which is one of the primary objectives of Nazi conquest. But gaining it is not the immediate and urgent requirement. Even if and when captured, the oil fields almost certainly will be temporarily ruined, and it would take many months to make them of material value.

The going is easier, and the immediate military advantage greater, in an all-out drive to the Caspian between Grozny and Astrakhan. Even the drive in the elbow of the Don toward Stalingrad, great steel and industrial center on the Volga, might wait, if necessary, to make available the strength to reach the Caspian.

Firmly entrenched along that sea, the Germans would have accomplished one of the most far-reaching developments of the war, virtually cutting Russia off from the Caucasion oil, which has constituted 80 percent of the nation's supply, and at the same time stopping the movement of war supplies from United Nations allies over the Caspian Sea and Volga River route from the Persian Gulf and through Iran.

Late last week, the Germans claimed that motorized infantry after a rapid advance had captured Elista, which is within 135 miles of the Caspian Sea and 175 miles southwest of Astrakhan, at the mouth of the Volga. That thrust, straight toward the Caspian, on the Volga delta, represented confirmation of statements made above.

At the same time that they reached Elista, the Germans were driving another wedge toward the Caspian 150 miles to the south, having advanced down the Rostov-Grozny railway and pipeline route to the vicinity of Georgievsk, well beyond the Kuban River and Armavir, and within about 140 miles of Grozny, which is an objective as an oil-producing and refining center besides being in the line of the march toward the sea. Those two

wedges, at Elista and toward Grozny, were menacingly suggestive of the pincers movements extensively employed heretofore against the Russians. Up to now the Russians have repeatedly avoided being encircled between such thrusts by withdrawing, having lost ground but saved men. However, withdrawal now will mean opening up the way to the Caspian, while resistance involves the danger of being trapped against the sea.

On the basis of German advances up to now, Caucasian oil continues to supply the Soviet armies fighting in the Caucasus, and it will fuel the Russian Black Sea fleet, which late last week reached Batum to base its future operations there; Batum being a large refining center, served by crude-oil and products lines extending across the southern Caucasus from Baku.

However, for supplying Russian armies around Stalingrad and to the north, as well as for supplying other oil needs in the interior of the U.S.S.R., the only routes now left, following loss of Rostov and rail lines to the east, are those through Astrakhan and Guriev, on the northern shores of the Caspian Sea.

If the Germans succeed in reaching Astrakhan, they possibly could stop there and still render virtually useless the Guriev port as a point for sending Baku oils into Russia, by dominating Guriev with air power.

Capture of Astrakhan itself would make less imperative for the Germans the occupation of Stalingrad, from the standpoint of transportation of oil and other goods on the Volga; as Astrakhan is at the mouth of that stream, with Stalingrad farther up the river; and capture of Astrakhan also would cut off shipments over a rail line leading northward from there, roughly paralleling the Volga to the east. At the same time, from Astrakhan, the Germans probably could by air prevent shipping of Caucasian oil to Guriev, 180 miles to the east at the northeast corner of the Caspian Sea, for delivery by pipe line to Russia's refinery at Orsk.

If the Nazis cannot succeed in reaching the Caspian but do capture Stalingrad on the Volga, they will achieve a substantial part of what would be gained by reaching Astrakhan, as the Volga River affords the predominantly important transportation route left for the Russians. Up the Volga are various important oil refining districts supplied with Caucasian oil by river boats. For example, the Saratov district, north of Stalingrad, was refining about 40,000 barrels daily before the war; while there are also several other refining districts farther up the river, with Moscow itself having plants connected to the river system by canal.

Even without the Caucasian oil, Russia would have some oil production, fairly well located, particularly in the Ural Basin, representing possibly one fifth of the total Russian production heretofore, or over 100,000 barrels daily.

Russia doubtless has intensified development of the Ural Basin fields, while also storing as much as possible in the interior.

Consequently, even if the Caspian Sea transportation routes and Caucasian fields cannot be saved, Russia will have substantial oil supplies.

Baku, the principal producing and refining district of the Caucasus, currently is in no immediate danger of German invasion; for between it and the German armies lie the rugged Caucasus Mountains, extending all the way from the Caspian to the Black Sea. Baku accounts for over 70 percent of Russia's crude oil production and 60 percent of the refining capacity.

This Is How the "Big-Inch" Looks

—Photo Courtesy Lincoln Electric Company.

The first weld on the 550 mile pipe line from Longview, Texas, to Norris City, Illinois, was made at noon August 3 shown above. The 24-inch line will be the largest welded crude oil pipe line in the world. Work was started near the Texas-Arkansas state line.

WASHINGTON ROUNDUP

By B. F. LINZ
Washington Correspondent

P-98 Reissued without Change Until September 15

Rationing of Eastern Fuel Oil More Imminent

Move to Step-up Output of War Products

RE-ISSUANCE without change of Preference Rating Order P-98 last week marked another chapter in the effort of the War Production Board to extend a modified version of its production requirements plan to the oil industry.

The revived order will apply until September 15, giving OPC a month in which to make another try at drafting regulations which will meet the aims of WPB to put industry under stiffer control so far as its materials needs are concerned.

An apparently sympathetic Senate finance committee which patiently heard the objections of industry representatives to Treasury proposals to wipe out the 27½-percent depletion allowance and the intangible drilling costs option has turned the new tax bill over to its drafting staff for rewriting but with no indication that it would adopt Secretary Morgenthau's recommendations, previously rejected by the House. (See page 12.)

The oil group made an impressive showing of the great need to encourage exploration and development rather than to make any action which might threaten its continuance, calling attention to the drive Hitler was making at the moment towards the Caucasus fields where Senator Lee of Oklahoma said, he is "trading blood for oil."

The hearings were marred only by the sudden death the preceding day of J. E. Moorhead, scheduled to carry the ball for the Pennsylvania Grade Crude Oil Association.

With Congress in partial eclipse as most members labored at repairing political fences in their home districts, the agitation over rationing died to a simmer during the week, erupting only briefly when Senator Lodge of Massachusetts fathered a bill to establish a nation-wide oil control in place of the sectional control which he said now exists.

Little of moment appears likely to occur in Washington until after Labor Day. A few members of Congress remain in the capital to hold brief sessions of House and Senate twice a week; President Roosevelt's rubber committee headed by Bernard Baruch continues to study its subject in its "office"—a park bench under the trees; Coordinator Ickes is vacationing in some Shangri La he refused to name to the newspaper men with whom he fences almost weekly around his conference table.

☆

P-98: With OPC and WPB unable to agree upon the provisions of the materials-control order designed to supersede P-98, the two agencies on August 13 decided to reissue the latter, which had expired August 1, to gain further time for development of the new regulations.

P-98 was reissued without any change in provisions, to apply until September 15, by which time, Deputy Coordinator Davies said, the new order will probably be ready for issuance.

The mix-up which for nearly two weeks left the industry without any guide as to how materials were to be secured, was the result not only of the inability of the two agencies to harmonize their differences but also of the failure of OPC experts concerned with the drafting of the new order to get down to work on it, although fully aware that P-98 carried an expiration date.

The proposed new order traveled between OPC and WPB several times before it was decided to devote another month to its drafting, being turned down by the latter agency because of the failure to provide the degree of control which the board desired.

☆

EXPORT REGULATION: For the purpose of implementing the foreign petroleum industry materials rating plan of the War Production Board, the Board of Economic Warfare has issued a new form of application for export certificates, designated as Form BEW-128, which, for the present, will be used only by foreign petroleum operators filing application for priority or allocation assistance and authority to export under Form PD-311 of the WPB.

The new BEW form is to serve the dual purpose of constituting the only means by which an applicant may apply preference ratings previously issued by WPB on PD-311 to deliveries of the articles and materials enumerated, and to constitute an export license permitting shipment of the articles and materials enumerated to the consignee in the country of destination indicated.

The form comes in sets of five copies of the form and an instruction sheet giving detailed information as to its use and directions as to how it must be filled out. Four copies must be submitted to the office of exports of BEW in Washington, and the fifth is for the applicant's own file.

If the application is in proper form, the board will issue to the applicant and send to the person or firm named on the form, two certificates: one, the original, constituting the export license, and the other, the quadruplicate copy, constituting the certificate of assignment of preference ratings. The export license is to be presented to the collector of customs at the point of exit when the articles and materials enumerated are ready for shipment, and the certificate of assignment of preference ratings must be forwarded to the supplier named, in accordance with the regulations of the WPB.

☆

EASTERN SUPPLY: New England, which has been most vociferous in demands that something be done to assure East Coast oil supplies, has a more nearly normal supply of oil, other than gasoline, than any other section of the rationed area, it was disclosed August 10 by Coordinator Ickes.

Stocks of heavy-fuel oil in the northeast actually are above the level of last year, while inventories of light-fuel and heating oils are at 72 percent of a year ago, while the average for the entire East Coast area is 52 percent. Kerosine stocks in the 6 states are at 85 percent, but for the whole rationed area only 67

percent of a year ago, he said. Only in gasoline stocks is New England low, with 52 percent of last year compared with 63 percent for the 17 states.

Deputy Coordinator Davies explained that extraordinary efforts have been made to build up New England stocks because of the peculiar conditions in that territory, where it is difficult to make deliveries in severe winter weather.

To beat cold weather, OPC allocated a greater proportion of tank cars to New England, and is seeking further to enhance the supply through the government's absorption of the additional cost of products purchased in the Midwest.

OPC revealed that 2392 of the 5000 additional tank cars asked from the Middle West, Southwest and Rocky Mountain region were put into East Coast service within a week, and officials expressed the belief that the full number would be provided in a matter of days.

At the same time, they warned residents of those areas to be prepared for rationing, if the transfer of cars diminished their supplies to the point where all needs cannot be freely satisfied.

The number of tank cars on the rails will be increased until the railroads say they can handle no more, Davies said.

One dark spot in the situation is the failure of oil consumers to switch to coal. Less than 0.5 percent of the 1,400,000 oil-fired installations in the northern half of the seaboard area have been converted, OPC estimated, and less than 4 percent of owners have taken any steps to convert.

"Apparently East Coast residents have not been aware of the seriousness of the fuel and heating-oil shortage," Ickes commented.

☆

RATIONING: Rationing of fuel oil in the East Coast district became more imminent last week as Price Administration officials continued their studies of possible supplies for the coming winter.

It was stressed that no decision has been reached as to whether to institute a rationing system, but experts in OPA were represented as having pointed out that there is no other way of assuring an equitable distribution of heating oils to householders.

Considerable resentment has been expressed in New England over the 43-day ban on deliveries of heating oil, which will continue until September 15, while dealers in the area report their tanks full to overflowing, and it has been pressed upon OPC and OPA that it would be wise to permit householders to fill their tanks in advance of the heating season, increasing by that much the amount of oil which could now be put into storage.

In other sectors of the ration theatre, seven western New York counties were put under gasoline rationing August 22, OPC Deputy Coordinator Davies advised members of the Virginia Congressional delegation that extension of the Plantation pipeline from Greensboro, North Carolina, to Tidewater, Virginia, was necessary as part of the war program and would release tank cars now moving out of the North Carolina city for use elsewhere in the East, and Defense Transportation officials met with oil men and railroaders in Chicago in the second of a series of conferences—the first held in Dallas a week before—to work out plans for extending the solid-train movement of oil.

Meeting loud complaints from filling-station operators that their tanks had been empty or nearly so when the 2½-cent gasoline price increase was authorized in July but full when it was rescinded this month, Price Administrator Henderson and the oil industry worked out a plan whereby the station men would be reimbursed for the heavy losses of which they complained.

The station operators will be reimbursed through the transportation pool, under an amendment to the agreement, approved by OPC, authorizing members of the pool to reimburse their distributors and retailers for losses sustained in selling at the reduced prices products which they purchased at the higher prices.

New proposals for conserving gasoline and rubber are being investigated by OPC. It was disclosed by Coordinator Ickes August 13.

Handing an orchid to Sun Oil Company for extensive experimentation and advertising at its own expense, Ickes said his organization was "very much interested" in plans reported by J. Howard Pew and J. N. Pew, Jr., to cut out some of the cylinders in six- and eight-cylinder motors, which it was claimed would save from 40 to 50 percent of gasoline and, by limiting speed, save rubber.

Another development which is being watched is that of the Glenn L. Martin Company, Baltimore airplane manufacturer, to equip ordinary box cars with collapsible rubber containers, enabling them to carry 13,500 gallons of oil, which is more than the regular tank car can handle. Ickes disclosed that during the week ended August 11, the railroads set up a new record, delivering an average of 809,430 barrels daily to Eastern terminals. The number of cars in use now is 67,400, an increase of more than 5000 so far this month, with more to come as a result of the recent request for another 5000 from the Middle and South West and Rocky Mountain areas.

☆

RESEARCH: The War Production Board last week reportedly was preparing to set up an agency to coordinate industrial research and pave the way for the development of needed materials, including synthetic rubber.

A number of the war agencies will have an interest in the proposed board, which it was said will deal with everything from cargo ships to synthetic foodstuffs, and it will be generously financed, a figure of $100,000,000 having been mentioned, part of which would be made available for a projected Technical Development Corporation which would have authority to build pilot plants to test out new methods.

The most important problem to come before the board initially would be that of rubber, and it was said that a number of technical men in the synthetic field have been in on conferences laying the groundwork for the new activity.

A major argument for the setting up of the board is that it will avert controversies over the relative merits of various processes, such as those for making synthetic rubber, and permit a determination of the best method for making that and other synthetic commodities, for producing new products in the various fields and in developing improvements in technique.

It is considered probable, also, that the agency might undertake the standardization and simplification of products—held in some quarters in the administration to be essential to supplying needed civilian goods with the use of a minimum number of factories and workers and the least possible machinery.

☆

PATENTS: The Department of Justice last week pulled a former special attorney out of the Army to testify before the Senate Patents Committee that an agreement between Standard Oil Company (New Jersey) and I. G. Farbenindustrie retarded the development in this country of methanol production.

Now an Army private, and wearing his uniform, John R. Jacobs, Jr., related the results of his studies of Standard-I.G. relations before the committee August 12, asserting that the agreement, consummated in 1936, not only slowed up the production of a possible motor fuel but gave the German chemical trust important information about the

use of isopropyl ether for aviation gasoline.

Jacobs testified that I. G. required Standard to work out an agreement with Du Pont, from which the oil company was buying methanol for its antifreeze products at about half the published price, and that although Standard had a surplus of refinery gases from which methanol could have been produced as far back as 1938 it did not start the construction of a methanol plant until late last year because of its satisfactory purchase agreement with Du Pont.

The effect of the Standard-I. G. agreement, he said, was to prevent the oil company from constructing a methanol plant. The company was not given the necessary information for the production of a methanol catalyst by I. G. until last year, Jacobs said, leading to the conclusion that the only reason Standard wanted the agreement was to use it against Du Pont to obtain a favored price on its purchases.

Richard J. Dearborn, president of Texaco Development Corporation and technical consultant to Rubber Reserve Corporation, also appeared before the committee, to deny charges that he and officials of Standard Oil Company (New Jersey) were engaged in a "conspiracy" to keep independents out of rubber production voiced by C. R. Starnes of Gladewater, Texas.

Starnes' charges previously had been denied by W. S. Farish, who advised the committee that a free license had been offered him to which the Gladewater operator objected because it was limited to the United States, its territories and possessions.

☆

STRATEGY: Following the lead of OPC and the oil industry, the Army is adopting methods for the more efficient operation of its oil tank cars through which it is expected to increase their delivery capacity by 30 percent or more, it was announced by the War Department, August 13.

The Army's plans call for maintenance of a reporting system on all cars, their distribution where and when needed and prompt unloading and return, as a substitute for the haphazard previous method of assigning cars to individual camps, posts and stations for use as needed.

☆

GARY: Official announcement of the resignation of Wright W. Gary as OPC director of refining last week elicited from Coordinator Ickes and Deputy Coordinator Davies words of high praise for his achievements while in the government service.

In a letter accepting his resignation, Ickes told Gary that "your accomplishment over the difficult year through which we have just lived has been most outstanding and is so recognized, I find, not only within the organization but elsewhere in government circles and in industry. In the prosecution of the war, this contribution has been of the most substantial proportions, and the recognition of which I speak is decidedly well-earned."

Davies also wrote his appreciation of Gary's work, declaring "you have made a brilliant contribution to the work of the OPC, and one which will be lasting. Further, you have achieved this splendid record during a difficult period of initial organization and under the many handicaps of pressure and strain to which we have been subjected during this first year."

In his letter of resignation, Gary assured the coordinator that he had arranged with the directors of Filtrol Corporation, of which he becomes president, to enable him to be available at any time for counsel on OPC problems.

ICKES SAYS—

Raising doubts whether a successor would be appointed to Wright W. Gary's job as director of the OPC refining division, Ickes said on August 13 that he "has a plan but no replacement." The coordinator, about to leave Washington for a vacation at a point he refused to reveal, declined to explain his cryptic statement.

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Whether the diversion of more tank cars from the Middle West will necessitate any curtailment in that area remains to be seen. At any event, it is believed all needs for heating oil will be met this winter and any rationing which may be necessary will be confined to gasoline. No decision, however, can be made until the results of the diversions, the alternative transportation developed and other factors have been counted up.

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The Reconstruction Finance Corporation has not yet settled the details of its financing of excess costs of transportation and Midwest purchases by companies to relieve the Eastern situation. OPC has submitted a plan, details of which have not been disclosed, which is under consideration by RFC.

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The inventory position in Washington and Oregon has improved but it is not likely that the one third cut in deliveries in that area will be lifted in view of the difficult coal and wood situation which has developed. Army demands for fuel, the establishment of new industries and the lack of labor to get out local coal and wood may make it difficult to assure heat for the greatly expanded population of the area next winter.

AVIATION GASOLINE: In a move to speed up production of aviation gasoline and other war products, OPC on August 14 issued two recommendations, one (No. 41) authorizing seven companies to negotiate cross-license and licensing agreements so that the whole industry may have available certain efficient methods for production, the other (No. 48) authorizing refinery operators to exchange technical information. The licensing recommendation was addressed to Shell Development Company, Standard Catalytic Company, Standard Oil Development Company, Texaco Development Corporation, Standard Oil Company (Indiana), Universal Oil Products Company, The M. W. Kellogg Company, and their respective affiliated companies.

It authorizes the companies to act jointly in developing processes that will further the production of essential war products, and in making their patents available to the industry in general. The companies agree to reduce royalty rates materially wherever the processes are used to produce war materials.

The cross-license and licensing agreements, royalty rates and other actions of the companies will be subject to approval of OPC and certification by WPB before becoming effective, and the recommendation does not affect the provisions of the consent decree in the Standard Oil Company (New Jersey) case.

The other recommendation is aimed at expediting production without undue use of critical materials, and it was declared by OPC officials that the exchange of technical information about patented processes and designs—to be done on the specific recommendation of the coordinator's office—will make "possible the largest saving of critical materials in new construction, the maximum utilization of existing facilities, efficient design or adaptation of plants to produce war products, and the quickest procurement of required amounts of such products."

Individuals and companies owning or controlling technical information or processes are asked to make them available in detail to OPC, and when the oil agency decides that any process or design owned by one company can improve the process or design used by another manufacturer of an essential petroleum war product, the information will be made available to the latter.

"Since speed up of production is essential, it is also recommended that in event there is a disagreement between companies concerning the detailed arrangments for the use of technical information, litigation must be postponed until the war is ended," it was explained.

Industry Fights Adverse Tax Proposals

By B. F. LINZ, Washington Correspondent

VIGOROUS opposition to Treasury proposals for elimination of the depletion allowance and the intangible drilling expenses option was expressed before a sympathetic Senate Finance Committee August 10 by representatives of the industry.

Headed by former Senator Thomas P. Gore of Oklahoma, who "fathered" the depletion allowance in 1917, industry representatives, supported by a number of senators, warned the committee that any change in the present set-up might or might not provide the $200,000,000 which the Treasury claims can be secured from a change in the law, but certainly would threaten the continued supply of adequate volumes of oil for the United Nations.

They told the committee that the country which has the most oil available may prove to be the victor in the conflict, but that the United States would not have the assurance of being that country if the depletion allowance is eliminated.

Senator Gore, one of the two surviving members of the finance committee which wrote the depletion allowance into the 1918 Revenue Act to meet another war situation, told the committee that "the oil industry regards the present law in the present circumstances as essential to its success, if not to its survival, and the industry regards its survival as essential to the effective production of oil."

The $200,000,000 a year which the Treasury is seeking, he said, is enough to run the war for about 13 hours and 13 minutes.

"It is proposed to abolish a system to obtain $200,000,000 a year which has secured to us a current supply in excess of current demands and a reasonable reserve for the future," he declared. The Treasury, he told the committee, has taken the position that the oil industry would have developed to its present position without the depletion allowance but has never demonstrated "that the system has failed to achieve its objective of securing an adequate supply of oil."

The blind former senator pointed out that Canada grants a depletion allowance of 30 percent, 2½ percent more than in this country, and in addition grants a 10 percent allowance to stockholders of oil-producing companies on their dividends, as a result of capital.

Spur to Development

The only question asked of Gore was propounded by Senator Barkley of Kentucky, who asked whether the difference between the 15 percent depletion allowed the mineral industries and the 27½ percent allowed oil and gas was justified. Gore pointed out that the government today is paying a premium for over-quota production of copper and asserted that the mineral industries should be given an increase in their allowance as a spur to greater development.

A comprehensive statement of the principles underlying the allowance and the conditions prevailing in the industry was submitted by Harold B. Fell, Ardmore, Oklahoma, on behalf of the 41 associations in the production division of the industry.

Fell pointed out that the allowance was granted during the last war, when the country faced a need for oil much less than that now experienced, which he warned may call for supplies far in excess of those now available. It was largely as a result of the allowance that our reserves have been built up to some 19,000,000,000 barrels, he contended, and that reserve, he said, "is one of the few strong weapons with which the country entered the present war."

The United Nations have lost most of their oil supplies, he told the committee, increasing the strain upon our own industry, which finds it necessary every year to drill an increasing number of dry holes to discover a major pool.

This discovery effort, he pointed out, is carried on with money that can be raised only if there is enough incentive, in the way of a possible margin after taxes in the event of success, to offer an inducement for investment in the gamble.

Fell quoted from reports of PIWC dwelling upon the need for maintaining the depletion allowance if production from stripper and marginal wells is to be continued.

"We submit that no legislative action should be taken which would retard exploratory drilling," he said. "Oil fields cannot be delivered 'on demand.' They can only be discovered by long scientific search and exploratory drilling over large areas. * * *

"Too much confusion has arisen from repeated attempts to shroud these deductions as highly complicated and technical mysteries and, without an understanding of their application to the business involved, to condemn them with labels imputing unfairness, special treatment, unwarranted loopholes and the like. The charge that the petroleum industry enjoys any 'special privilege' arises, no doubt, from a lack of complete knowledge of its operating conditions and from the misunderstanding resulting therefrom. There is certainly a real distinction between 'special privilege' and the recognition of special conditions."

Outlining at length the special conditions which exist, Fell spoke of the broad exploration and leasing of land that must be undertaken, the exploratory drilling and, where oil is found, the additional development in the interest of royalty holders, for offset purposes and to outline the boundaries of the pool, and the need for maintaining production.

All of these peculiar circumstances, he said, prove that the oil-producing business is extremely hazardous and that increasing amounts of money must be plowed back into every venture.

"The Secretary, evidently assuming our reserves to be adequate, recommends that these incentives for exploration be eliminated, and he states that the elimination will produce $200,000,000 of additional revenue at the proposed rates. This we assume is his maximum figure. If the Secretary is right in his analysis of our position from the standpoint of petroleum reserves and present trends, and if the Office of the Petroleum Coordinator, the Industry War Council, the Interstate Oil Compact Commission, the National Conference of Petroleum Regulatory Authorities and, in fact, the entire oil industry is wrong—we will gain

[*Continued on page 34*]

Oil in the War

Current "squeeze play" between higher costs and ceiling prices limits ability to serve

The military requirements for petroleum are many and varied and to "keep 'em rolling" and "keep 'em flying" the oil industry must be kept in a sound and vigorous condition.

A Case for Special Handling

A MASS-PRODUCTION enterprise and intensely competitive, the oil industry never has had more than exceptionally moderate profit left after giving the millions of motorists and other consumers high quality goods and efficient service. For some companies, however, even the small profit has been wiped out and replaced by losses in the squeeze between sharply increased costs and ceiling prices. And thereby has been limited the capacity of the industry for serving essential civilian requirements and military needs.

To "keep 'em rolling" and "keep 'em flying," the nation needs a vigorous and healthy oil industry; not one enervated by financial losses and without the income necessary to do the many unusual and expensive things it is called upon to do.

Following is presented the third and concluding article of this series dealing with the war-time economic condition of the oil industry. The purpose of the study has been to inform oil men of the industry's growing responsibilities in the war effort, what is being done to meet these new requirements and what is necessary to assure a continuing and adequate supply of petroleum war products, when and where needed, for the military units of the United Nations.

Government Must Recognize Unique Position in War

By L. J. LOGAN, Associate Editor

CONFRONTED on the one hand with the responsibility of carrying out high-cost measures necessary in prosecution of the war, and on the other hand with lack of adequate income to cover costs of doing those things, the oil industry has been unable to escape serious losses. And having failed to gain prompt and full relief from the losses, the industry has been unable fully to use its potential strength and ingenuity, with the result that the most efficient possible performance has not been achieved.

Viewing the losses not simply as a financial matter, but as a serious impediment to maximum fulfillment of its war-time responsibility, the industry naturally has been greatly concerned over continuance of the losses, and has actively sought relief from them.

But it has encountered, in that connection, an extreme difficulty in gaining compensatory adjustments because of the fundamental and relatively inflexible policy followed by the Office of Price Administration in controlling prices and related economic matters.

As evidenced clearly in numerous actions, OPA has taken the guiding attitude that in keeping prices in hand, it must not be concerned too much with preserving the ability of industries or businesses to continue to show profits as in the past, particularly if the profits heretofore have been relatively high.

Furthermore, this guiding policy apparently is applied to the oil industry on the basis that the industry is among those which have been making high profits and which should be in position now to operate on reduced earnings or even to sustain losses.

Actually, however, facts and figures do not justify such classification.

The oil industry definitely is not a high-profit industry. Highly competitive, and subject to exceptional hazards, it has consistently earned lower return on invested capital than have all major industries in the aggregate. By the same token, it has given its customers exceptionally good values.

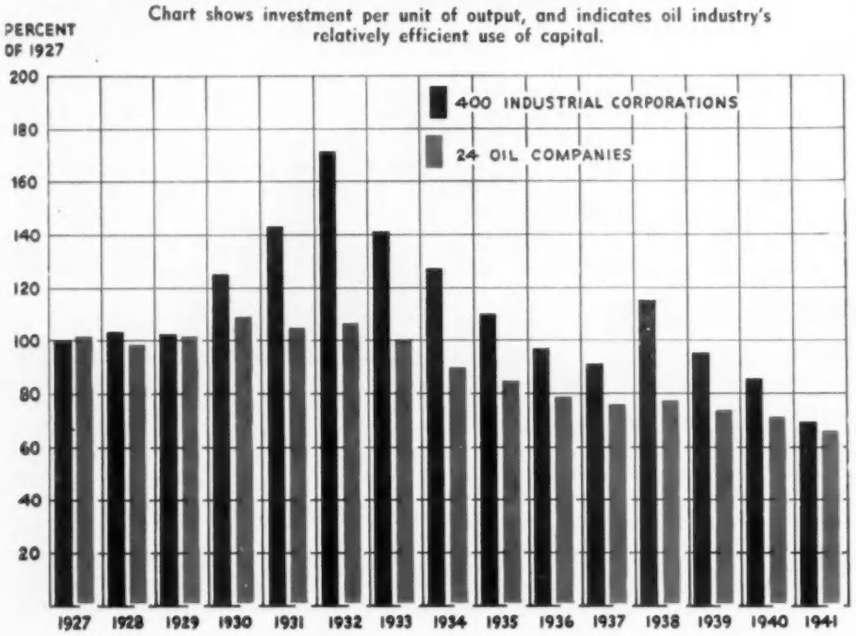
As shown in an accompanying table, *24 oil companies, constituting a very large part of the industry, earned an average return of only 5.4 percent on investment during the past 15 years, 1927-1941, as compared with an average return of 7.6 percent for 400 industrial corporations.*

The same table and a chart show that the highest return for any year for the 24 oil companies was 9.8 percent, compared with 12.3 percent for the 400 companies representing all leading industries.

Similarly, the poorest year of the 15 brought for the 24 oil companies a deficit equivalent to 1.6 percent of their net worth, whereas the 400 industrial corporations consistently avoided op-

Indexes of Investment and Output of 24 Oil Companies and of 400 Industrial Corporations (1927 = 100)

Chart shows investment per unit of output, and indicates oil industry's relatively efficient use of capital.

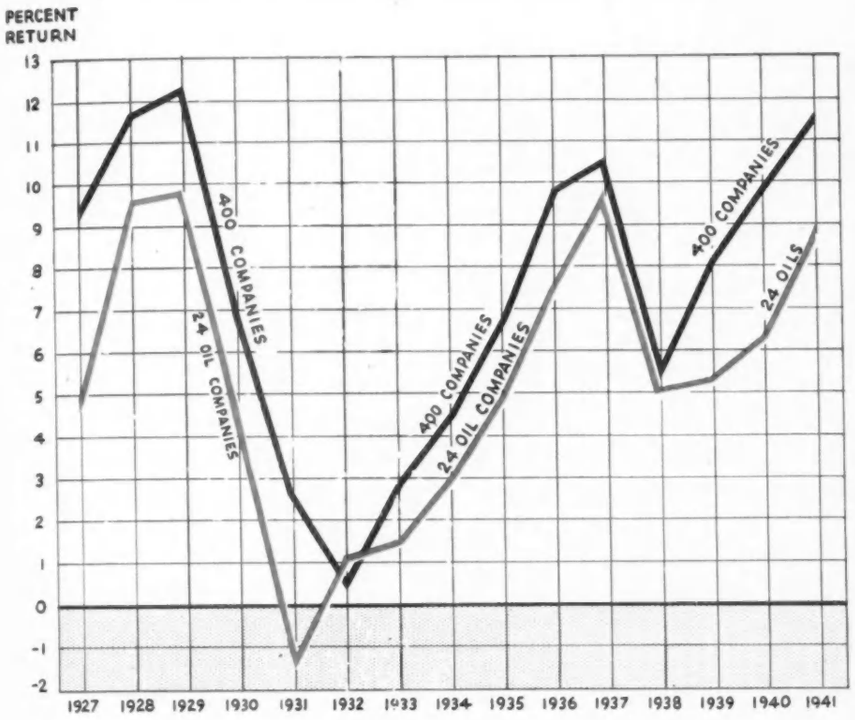


YEAR	24 OIL COMPANIES			400 INDUSTRIAL CORPORATIONS		
	Investment[1]	Output[2]	Investment per Unit of Output	Investment[3]	Output[4]	Investment per Unit of Output
1927	100.0	100.0	100.0	100.0	100	100
1928	107.3	110.1	97.5	107.2	104	103
1929	119.3	119.2	100.1	118.5	116	102
1930	120.3	111.8	107.6	120.4	96	125
1931	112.0	108.0	103.7	112.7	79	143
1932	103.8	98.9	105.0	104.6	61	171
1933	102.6	103.9	98.7	103.2	73	141
1934	95.4	108.1	88.3	100.3	79	127
1935	96.4	116.5	82.7	101.3	92	110
1936	100.0	129.0	77.5	104.3	108	97
1937	106.4	142.7	74.6	108.5	119	91
1938	106.7	140.5	75.9	108.3	94	115
1939	108.2	149.3	72.5	108.0	114	95
1940	107.6	156.1	68.9	110.0	129	85
1941	109.6	170.0	64.5	112.4	164	69

[1] Net worth of 24 companies. [2] Crude runs to stills. [3] Net worth of 400 companies—Standard & Poor's Corporation. [4] Federal Reserve Board Index of Industrial Production.

Oil Industry's Economy

Comparison of Profits, Net Worth, and Rate of Return of 24 Oil Companies and of 400 Industrial Corporations—1927-1941



YEAR	24 OIL COMPANIES			*400 INDUSTRIAL CORPORATIONS		
	Annual Profits (Millions of Dollars)	Net Worth (Millions of Dollars)	Rate of Return (Percent)	Annual Profits (Millions of Dollars)	Net Worth (Millions of Dollars)	Rate of Return (Percent)
1927	264.8	5,442	4.9	1,982	21,047	9.4
1928	557.7	5,839	9.6	2,630	22,571	11.7
1929	635.9	6,491	9.8	3,061	24,943	12.3
1930	295.2	6,549	4.5	1,747	25,343	6.9
1931	†96.0	6,096	†1.6	631	23,730	2.7
1932	53.9	5,651	1.0	69	22,024	0.3
1933	77.9	5,583	1.4	632	21,724	2.9
1934	152.6	5,194	2.9	956	21,110	4.5
1935	251.9	5,247	4.8	1,431	21,330	6.7
1936	410.0	5,440	7.5	2,145	21,942	9.8
1937	562.2	5,789	9.7	2,416	22,844	10.6
1938	289.9	5,804	5.0	1,203	22,787	5.3
1939	312.9	5,888	5.3	1,869	22,737	8.2
1940	369.5	5,854	6.3	2,287	23,144	9.9
1941	524.6	5,963	8.8	2,752	23,667	11.6
Average during period 1927–1941	310.9	5,789	5.4	1,721	22,730	7.6
Average during period 1933–1941	327.9	5,640	5.8	1,743	22,365	7.8

* Compiled by Standard & Poor's through 1939. Extended to 1941 on basis of tabulations published by the National City Bank.
† Deficit.

erating loss, having reported profit of 3/10 of 1 percent in the most unfavorable year.

Only in 1 year out of the 15 did the 24 oil companies have as large a return on capital investment as did the 400 companies of all lines.

Furthermore, recent years have brought no change in the relative earning powers of the oil industry and of industry in general. In the post-depression period, the 24 oils had an average return of 5.8 percent, compared with 7.8 percent for the 400 companies. In 1940 the ratio was 6.3 percent return for the oils against 9.9 for the 400 companies, and in 1941 it was 8.8 against 11.6.

As might be expected from the above data, the oil industry ranks far down the list in comparing its return on investment with that in other industrial groups. Tabulated herewith is such comparison of results in 1940 and 1941.

Rate of Return on Investment Lower in Oil Industry Than in Most Other Manufacturing Industries

Rate of return obtained by dividing net income for year by net worth at beginning of year. Net income considered is that after depreciation, interest, taxes and other charges and reserves, but before dividends. Net worth used in computations is book value of outstanding preferred and common stock and surplus account at beginning of each year. This table is adapted from data published by the National City Bank of New York, March, 1942.

INDUSTRY	No. of Companies	Percent Return 1940	Percent Return 1941
Transportation equipment, miscellaneous	26	33.6	48.2
Household equipment	16	17.3	22.8
Automobile equipment	30	18.5	22.2
Office equipment	10	13.2	21.5
Automobiles	12	18.2	21.1
Machinery	73	15.0	21.0
Drugs, soap, etc	14	21.1	20.8
Soft drinks	10	16.7	19.9
Wood products except lumber	6	21.7	19.1
Building equipment	23	17.1	19.1
Lumber	14	11.3	18.5
Hardware and tools	25	12.8	16.0
Electrical equipment	26	12.0	14.5
Brewing	18	13.5	14.4
Chemicals-industrial, etc	25	13.5	13.9
Textile products, miscellaneous	23	11.9	13.6
Metal products, miscellaneous	32	11.4	13.4
Distilling	10	11.7	13.1
Stone, clay and glass, miscellaneous	18	12.2	13.1
Tobacco products	17	14.5	12.5
Miscellaneous food products	40	10.8	12.3
Cotton goods	41	5.1	12.3
Clothing and apparel	19	9.0	12.0
Total Manufacturing	825	9.9	11.9
Woolen goods	6	5.5	11.5
Rubber products	17	9.0	11.4
Railway equipment	17	7.3	11.4
Silk and rayon	10	10.1	11.2
Agricultural implements	10	8.6	10.9
Leather tanning	4	3.6	10.5
Paper products	37	9.4	10.5
Nonferrous metals	6	8.3	10.1
Iron and steel	38	8.7	9.6
Shoes, etc	16	7.0	9.5
Paint and varnish	11	7.8	9.2
Petroleum Products	13	5.7	9.2
Knitted goods	12	2.0	9.0
Manufacturing, miscellaneous	14	5.8	9.0
Meat packing	13	5.5	8.8
Cement, gypsum, etc	13	7.8	8.6
Dairy products	7	7.9	8.5
Baking	14	7.9	7.7
Sugar	18	4.8	5.5
Printing and publishing	13	5.3	5.1
Fertilizer	8	2.5	4.3

Similarly tabulated are representative earnings of different industrial groups for the first quarter of this year, with

the oil industry again far down the list. And even so, the initial quarter was not representative of results for the elapsed part of 1942 as a whole, the second and third quarters having been less satisfactory generally than the first.

Oil Industry at Bottom of List in Earning Power During First Quarter of This Year

Rate of return computed from net worth at beginning of year and net income for first quarter placed on annual basis. Net income considered is that after depreciation, interest, taxes, and other charges and reserves, but before dividends. Net worth used in computations is book value of outstanding preferred and common stock and surplus account at beginning of each year. This table is adapted from data published by the National City Bank of New York, May, 1942.

INDUSTRY	No. of Companies	Annual Rate of Return (Percent) First Quarter of 1941	Annual Rate of Return (Percent) First Quarter of 1942
Automobile equipment	17	16.7	16.7
Metal products, miscellaneous	31	13.4	14.4
Office equipment	4	12.0	13.5
Machinery	19	17.2	12.0
Chemicals, drugs, etc.	21	14.4	11.3
Foods and beverages, miscellaneous	15	13.3	10.8
Electrical equipment	8	14.0	10.8
Railway equipment	8	10.6	9.6
Paper products	10	7.0	9.3
Total Manufacturing	231	13.0	9.2
Automobiles	7	22.8	8.3
Iron and steel	24	11.6	8.1
Building equipment	8	9.3	8.0
Baking	5	7.0	7.5
Manufacturing, miscellaneous	21	9.5	7.0
Textiles and apparel	11	14.1	6.9
Stone, clay, and glass	13	11.5	6.5
Petroleum Products	9	6.7	6.0

Importantly responsible for the consistently limited profit available to the oil industry has been the keen competition maintained within it. There are thousands of producers, several hundreds of refiners, and many thousands of marketers. Within each branch of the industry, large and small operators compete against each other.

Furthermore, about three fourths of the industry's business is conducted by somewhat over a score of so-called integrated companies which operate in all branches of the business and which are in position, therefore, to offer the stiffest competition that can be given, through the most efficient possible marshalling of capital resources and over-all operating advantages. In each division of the industry, there must be met not only the competition offered by those operating strictly within that division but also the competition of those who may have particular competitive advantage by reason of extraordinary economics effected in other divisions. In every division this competition of the hardest kind is encountered, and thereby is assured a whole large industry of remarkably competitive nature.

Constantly at work, therefore, are all the forces that can be directed toward giving or meeting competition, including maximum use of technological advances and full application of operating efficiencies, toward the end of most efficiently and most reasonably serving the public.

Actually, in the oil industry, the competition apparently has been carried practically to its fullest possible extent, as the average profits which are consistently possible are sufficient only to preserve the capital investment employed and to earn thereon a rate of return which is close to the minimum necessary for attracting new capital when needed.

Moderate Profit Due to Giving Good Values—Not to Over-Investment

As in figures given below, the oil industry can readily show that it is not a high-profit industry but on the contrary a relatively low-profit industry. And as just stated, the characteristically low earnings reflect the stiff competition within the industry.

However, price-control authorities, in fixing ceiling prices and thereby largely determining possible earnings, have asserted that low earnings must be expected in some instances because of being the necessarily limited return on excessive or wasteful investment.

Railroads, as a class, exemplify what is meant; their capital investment being comparatively great, with the result that only a relatively small return is possible.

In the case of the oil industry, however, this explanation of moderate earnings is not justified. Actually, it can be shown that the industry has been generally conservative and prudent in the investment of capital; that its investment really is not as great as commonly believed; and that the oil industry has a better record than industry in general in having achieved increasingly efficient use of capital by expanding output on a given amount of investment.

In the past, there has been wide use of misleading figures on the United States oil industry's investment, the industry being commonly described and thought of as a 14- or 15-billion dollar enterprise, whereas it actually is an 8-billion dollar industry, having a *net investment* of only about that amount.

The figures of around 15-billion dollars have seemed desirable, apparently, for making oil seem like a giant among industries. However, they are not entitled to serious consideration, when it is recognized that they are *gross investment* figures, usually including the 1-billion dollar investment of United States oil companies in foreign countries. Also included, sometimes, have been the investments of natural gas companies.

Gross investment figures mean little because they include original costs of physical facilities currently employed, whereas practically all the facilities are at some stage on the road toward the junk heap. If a man wears a pair of shoes bought a year ago for $10 and a suit of clothes purchased two years ago for $40, both of

[*Continued on page 35*]

The Petroleum Industry's Investment in the United States

From paper by John D. Gill and James S. Weatherby, of Atlantic Refining Company, presented before American Institute of Mining and Metallurgical Engineers, New York, February 12, 1942.

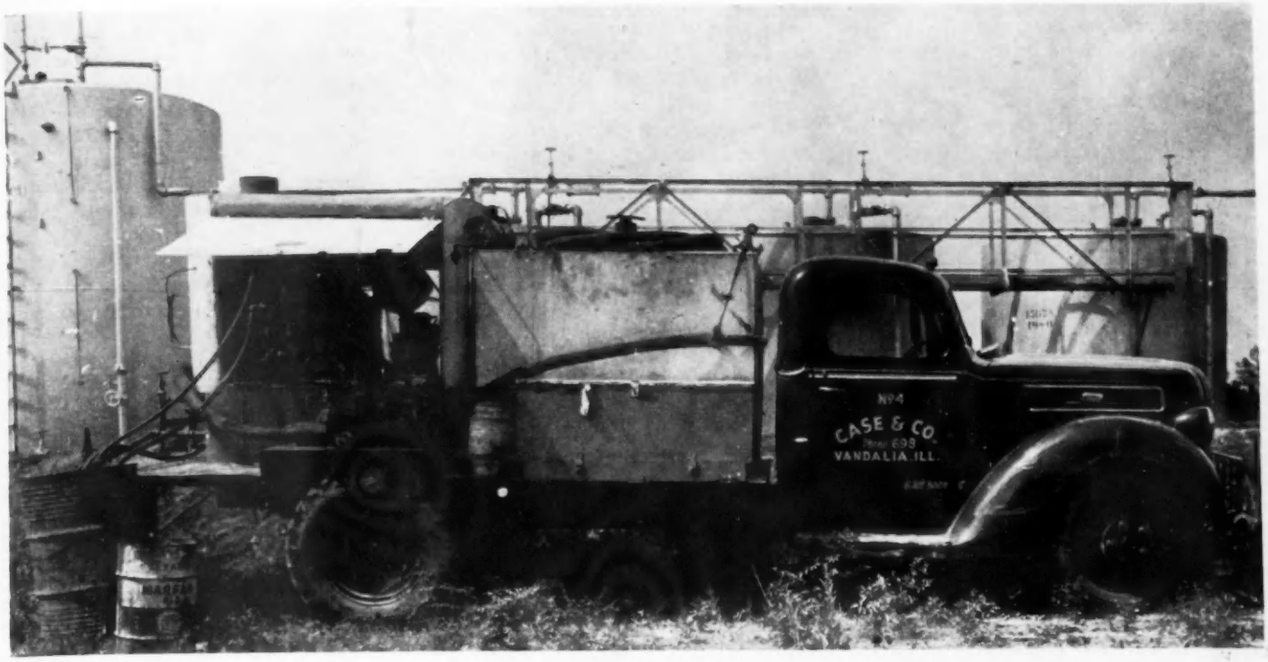
Net Investment in United States Petroleum Industry[1]—1940
Millions of Dollars

DIVISION	Net Plant	Percent	Including Other Assets[3]	Percent
Crude Oil Production[2]	$3,440	51.6	$3,890	47.6
Crude Oil Pipelines	431	6.5	476	5.8
Marine Transportation	224	3.4	247	3.0
Refining	897	13.5	1,422	17.4
Tank Cars	92	1.4	98	1.2
Refined Products Pipelines	68	1.0	75	.9
Marketing	1,404	21.1	1,872	22.9
Administrative and Miscellaneous	100	1.5	100	1.2
Total	$6,656	100.0	$8,180	100.0

Gross Investment in United States Petroleum Industry[1]—1940
Millions of Dollars

DIVISION	Gross Plant	Percent	Including Other Assets[3]	Percent
Crude Oil Production[2]	$7,400	54.7	$7,850	52.2
Crude Oil Pipelines	982	7.3	1,027	6.8
Marine Transportation	528	3.9	550	3.7
Refining	1,936	14.3	2,461	16.4
Tank Cars	255	1.9	262	1.7
Refined Products Pipelines	99	.7	106	.7
Marketing	2,170	16.1	2,638	17.5
Administrative and Miscellaneous	150	1.1	150	1.0
Total	$13,520	100.0	$15,044	100.0

[1] Does not include investment of United States oil companies in foreign countries, estimated by Department of Commerce at $1,075,000,000 (1936 latest figures published).
[2] Includes oil industry's investment in natural gasoline plants—also gas producing properties where inseparable from oil properties, but investments of natural gas companies are not included.
[3] Principally inventories of crude, products, material and supplies and net working capital.



Truck-Mounted Steam Cleaning Unit Performs Many Jobs

By ELTON STERRETT, Staff Writer

USE of steam for cleaning, paraffin removal and tank-bottom treating has long been a stand-by of the production department, but until recently has been restricted to those areas where existing installations provided the necessary steam or to operations of sufficient magnitude to justify the hauling in and setting-up of a boiler. The standard fire-tube boiler requires the provision of adequate water supply, installation of a gas or fuel oil system for the burners, and use of heavy hauling equipment to make it available at the desired location.

In Illinois fields there is now being used an adaptation of the coiled-tube type of "boiler," or, more properly, steam generator, which was so successful as source of high-pressure steam in the days of the White steamer automobile. This type of steam generator, with the advent of gasoline-engine propelled automobiles, was ignored until diesel-powered trains removed the source of steam which was used for passenger-car heating. A type of coiled-tube steam unit, burning oil and raising steam to pressures approximating those carried by the average locomotive, then was developed for train heating.

The train heating unit possessing the necessary qualities of portability, low weight, and practically instantaneous steam generation, was then mounted on a truck, with integral fuel oil and water tanks, and thus made available steam of 300 pounds pressure wherever oil-field roads permitted entry of the truck unit.

Steaming Painted Tanks

Labor shortages no longer permit the tying up of large gangs on the cleaning of lease tanks, walkways, gun barrels and other units which, on even the most carefully managed leases, eventually become fouled with paraffin, gum, dirt and oil, and which must be cleaned periodically in the interests of safety, fire protection, equipment inspection and repainting.

Pictured at top is a truck-mounted steamer unit, with generator at rear, dual fuel-oil and water tank in center of truck, and cylindrical gasoline tank atop the rectangular unit. A gear-type pump, mounted on left of rectangular tank, serves as water pick-up, being driven from truck power take-off.

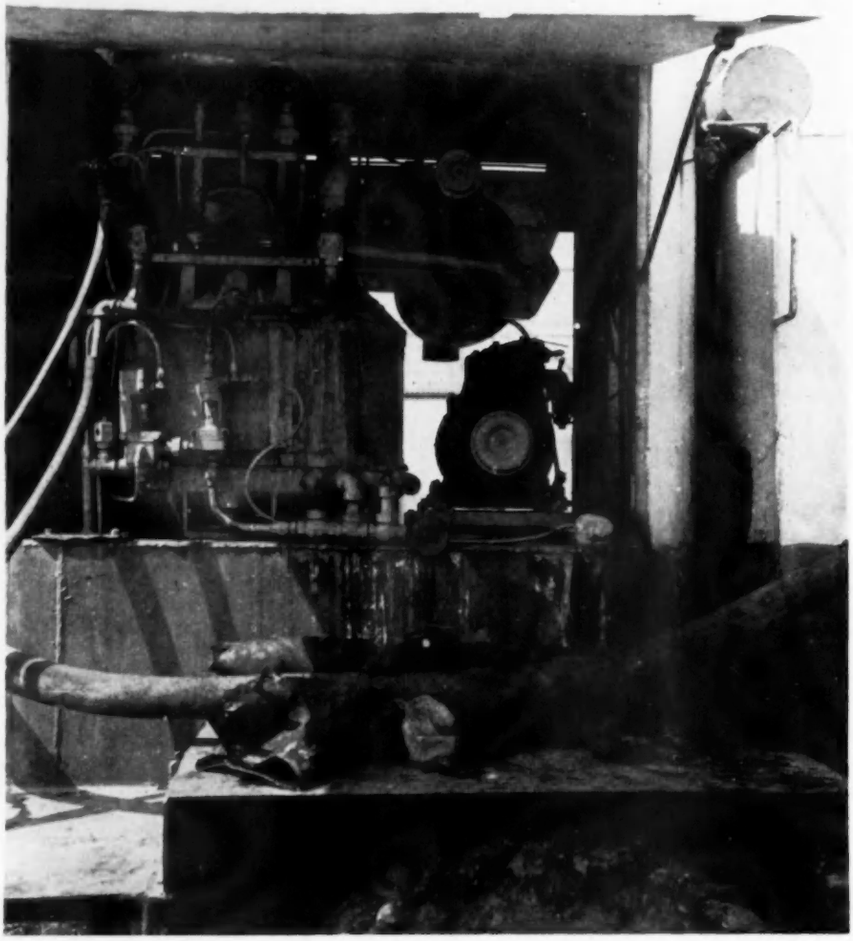
Many companies clean tank batteries at least once a year, when handling crudes such as found in the Louden (Illinois) fields, and at six months' intervals when the deposits on the outsides of tanks contain petroleum products which under certain weather conditions may give off inflammable or explosive gases in volume sufficient to be dangerous. Where crude such as Talco (Texas) is encountered, tank batteries may be cleaned advantageously and operations speeded up thereby if the interval be cut to three months.

Using the portable steaming unit, a battery of three high 500's, a gun barrel, and attendant walkways, can be cleaned by a force of not to exceed three men in a matter of as many hours, the actual steaming time depending upon the tank

temperatures, weather conditions, and type and thickness of the accumulated dirt.

Tank cleaning may be done with steam alone, steam from the generating unit being carried to the job in a standard steam hose or through combination of flexible piping and hose, and directed against the surfaces to be cleaned. This method relies largely upon the dual blasting and heating effects of the steam to remove the loosened dirt, and is not as satisfactory as the one usually followed, in which steam from the generating unit is mixed with a stream of water at some point outside the generating coils, so as to make the resultant steam as wet as possible. This reduction of steam temperature guards against blistering of tank paint, and also provides sufficient condensation flow as the relatively cold tank metal is contacted to form a flushing film which aids greatly in removing the waste and dirt without spattering it over ajoining structures.

If further refinement of the cleaning is desired, the stream added to the steam flow may carry cleaning compound of any desired strength, the cleaner being added in the drum or other mixing vat and picked up in solution from that point by the suction hose from that end of the unit pump transferring the mixture into the flow line to the washing nozzles.



The steam-generating unit, complete with gas-engine power, blower, double-end pump for boiler-feed and injection water, and automatic regulators for shutting down unit in case of water shortage, pressure drop or derangement of any of the interconnected units of plant.

The amount of cleaning chemicals added to the drum of water is varied to accord with the physical characteristics of the dirt film to be removed, and may be stepped up in strength to the point where it becomes an effective paint remover. Tanks to be repainted may then be cleaned by steam in a fraction of the time the paint can be removed by liquid paint removers, and without the hazards attendant upon hand scraping or flame removal.

No rinsing of the flushed surfaces is required unless a strong solution has been used, the usual proportioning of the cleaner being such as to leave the underlying and adherent paint on the tank in proper condition for application of a cover coat if such be desired.

When steam cleaning tanks, work is carried forward from the top downward, and from the end farthest from the tank ladder or walk stairway, so as to avoid double applications over any surface. As the dirt is flushed off, it is possible to cover again any spots not showing the desired cleanliness at first pass of the nozzle. Repassing the nozzle over a spot where the paint is thin and must be renewed by spotting, rather than complete repainting of the structure, loosens the old covering and blows it clear, manipulation of the hose feathering the paint at the edge of the spot into that left adhering. The same effect is also secured by shortening the gap between tank metal and hose nozzle, the heating effect of the steam being greatly intensified as the area of impingement is reduced.

Cleaning Pulled Tubing

Tubing pulled from a well being serviced is frequently found to be so clogged with paraffin, especially through certain zones of the well depth, as to require thorough cleaning before returning to the well. Where such tubing is to be steamed out, the operation is speeded up and removal made more complete if the tubing be stacked with the end away from the well a foot or so lower than the other, and with the random lengths taken care of at the lower end. Close ranking of the tubing at the high end reduces the labor of switching the steam nozzle, and enables a check on finished work to be kept without markers or other aids.

The steam generator is set up as for tank cleaning, except that the dilution stream pumped into the steam is pure water only, to give as great a volume of flushing fluid as possible after the heat in the steam has liquefied the paraffin.

The nozzle used for tubing differs from the constriction type used in tank work. The end of the steam hose terminates in a swage the larger diameter of which corresponds to the pipe size of the tubing. The tapered thread of the swage interlocks with the threads in the tubing collar, affording anchorage against the back pressure of the steam, but permitting rapid disengagement and shifting to the next joint after inspection shows completion of paraffin melting in the joint undergoing steaming.

The volume of steam entering a partially clogged joint of tubing first blows through in a puff, dependent in volume upon the clear area within the ring of paraffin on the tubing walls. Then the paraffin begins to melt and the steam condenses, to be followed by a flow of steam, hot water and entrained paraffin. The feeding of water to the steam as it issues from the steam generator greatly increases the amount of water thus made available for washing the paraffin from the tubing as it is melted,

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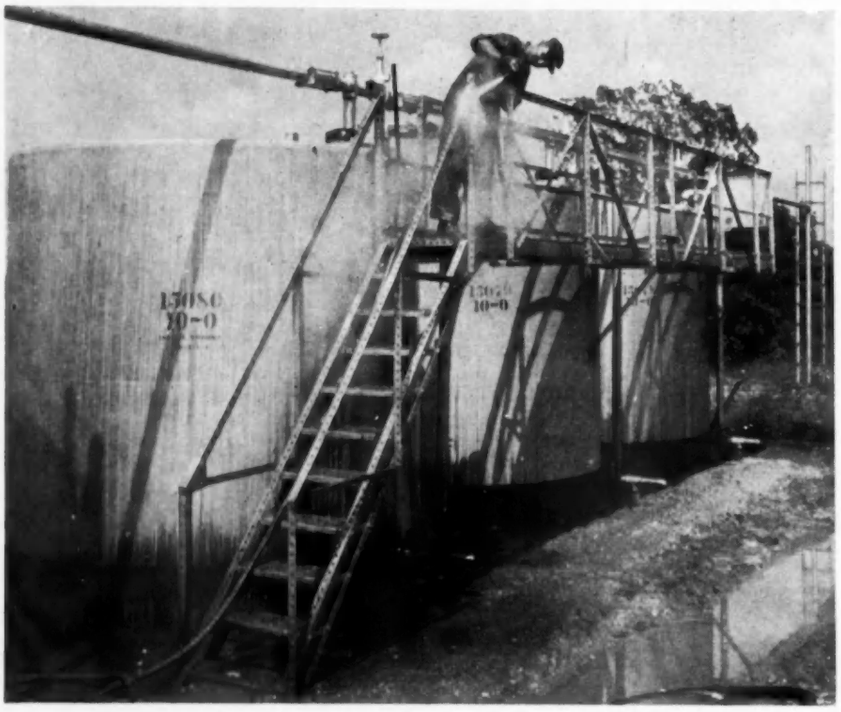
and prevents possible reformation of the deposits at spots within the tubing joint.

Tubing flushed out with steam remains heated above the melting point of paraffin for a period long enough to insure complete drainage of the liquefied material, leaving the interior walls of the tubing as smooth and clear as when first run in the hole. Unlike mechanical scraping, steam cleaning is effective throughout a sag in the tubing, and produces the same results on both upper and lower surfaces of the tubing. The pipe is heated enough to melt and cause to flow off any deposits on the outside.

The usual tank-cleaning type of nozzle is used when steaming paraffin from sucker-rod strings preparatory to close examination or rerunning in the hole. Where all sides of the rod cannot be reached with the direct stream of steam from the nozzle, paraffin removal is effected by concentrating the blast on each portion of the rod until it has been heated above the liquefying temperature of the deposit.



Jet of saturated steam, carrying dissolved cleaner, melts and scours away oil, paraffin and dirt from tank battery, railings and walkways. The steam jet clears corners, perforated steps and other surfaces hard to reach or slow to clean with hand tools.

If the flushing and heating stream of wet steam carries water enough to insure partial mixing or emulsification of paraffin as it is softened, the film of water forming on the rods will be sufficient to insure against adherence or cementing of any residual drops of paraffin to the metal on cooling. Steam cleaning of rods and tubing, while effectively loosening paraffin and other oil or wax deposits, does not affect the scale-forming natural protection for the metal against corrosion, as might be the case were mechanical scraping or wire brushing to be used, and the ultimate life of the material thus conserved.

Cleaning Surface Lines

The portable steamer has been used effectively in cleaning flow lines between well, separator and lease tanks, it being necessary only to break the line at some point to allow the tying in of the steam inlet. Most field lines are equipped with tees in place of ells on some of the right-angle direction changes in the vicinity of the well, it then being possible to remove the bull plug and connect the steam line to this fitting without disrupting normal flow lines.

Steam cleaning of paraffin under such conditions is quickly effective if the line is not entirely blocked by paraffin accretions. Where a small flow is still possible through the line, even if the aperture be no larger in diameter than a lead pencil, the steam will rapidly establish flow through the cohering material, melting and carrying away more and more of the paraffin until the pipe bore is restored to former diameter.

If the effect of paraffin deposit be checked on such field lines and periodic gauge readings be taken or recorded, the increase in gradient in the pressure curve will give warning of the iminence of clogging. For normal flow lines—2-inch, coupled—between units in the Illinois fields, this figure should show below 40 pounds to the square inch if it is expected to find space within the paraffin ring to permit certain establishment of flushing flow before slumping masses of material can slug together and block circulation.

Steaming is also effective, though at a much slower rate, when the line is completely blocked by paraffin. If steam pressure be applied at a convenient inlet of such a line, the warning and liquefying effect of the steam will be held to a relatively short section of pipe, proceeding progressively along it as the accretions melt and slough off enough to permit the steam pressure to force ahead over the inert liquid mass below it.

If the flow line be on the surface, instead of buried, the clearing process can be greatly accelerated if one steam hose be made up to the temporary inlet to the pipe, and a second hose, equipped with the usual type of nozzle for tank cleaning, be played along the pipe to warm it and thus to free the paraffin adhering to the upper half of the pipe. The melted paraffin will tend to slough away, opening a small space at the top of the pipe to steam flow which, once established, will bring the melted paraffin with it into tanks, burning pits, or wherever else the waste material is delivered.

Only in comparatively few instances, and then in clearing lines which have been allowed to stand, clogged, over considerable periods, has it been necessary to tap into any short line at more than one point to begin movement of the paraffin toward the outlet. On these lines, alternating of the steam connection between the tap into the line and a connection at the normal outlet end results in gradual freeing of the clogging mass and restoration of desired flow.

Blowing of dry steam, flow from the generator unit without the addition of the auxiliary water normally added to saturate the stream and add to the carrying volume, is sometimes found advantageous in clearing the line of any residual water left in sags and low joints after the paraffin accumulations have been melted and washed clear.

Down-the-Hole Cleaning

The truck-mounted steam generator has been used in Illinois and in the East Texas field for clearing paraffin from tubing strings still in the well, without pulling rods or otherwise disrupting well-head equipment, when the tubing string has been previously equipped for such servicing.

By means of a check valve run on the tubing string below the zone of paraffin formation, it is possible to force

Swage nozzle to fit tubing collars interlocks with threads therein to afford quick lock of steam line to pipe joint as saturated steam is blown through stacked tubing to clear it of accumulated paraffin deposits. Flush stacking aids check on work progress.

steam down the tubing from the generator and to liquefy the deposit, forcing it out ahead of the blow and depositing it again in the oil below the choked section—in which case it must be removed promptly lest it solidify and form an even greater dam against oil flow at its new location.

Since paraffin once melted tends to remain for a considerable time in the oil without again crystallizing out, a system using hot oil instead of steam, but utilizing the steam generator as heating means for the oil, has been developed.

Under this plan, the steam is run through a portable heat exchanger, transferring its heat to a stream of oil flowing across the exchanger tubes and bringing the temperature of the oil far enough above the paraffin melting temperature to compensate for heat losses while being pumped down the tubing. Since the hot oil, especially in fields such as East Texas, constitutes a decided fire and explosion hazard, the system is closed, oil being handled through the exchanger and thence to the well through high-pressure pumps without admission of air.

The heated oil is forced down the tubing, contacting and melting the paraffin, and carrying through the side-door check in the tubing string sufficient fluid standing within the tubing to permit maintenance of flow until the deposits are reduced. Checks in East Texas have

Blast of steam emerging from paraffin-fouled tubing shortly after application of swage to collar. Waxy material is being swept out as droplets in steam of condensation scouring through pipe.

demonstrated that this is completed within 30 minutes, the displaced oil accumulating in the tubing and setting up a head which is rapidly pumped down to normal levels once the well is put back on production.

In wells where no provision has been made at the time of running tubing for steaming out of the paraffin deposits, it is possible to use the steamer and the heated oil stream by picking up standing and traveling valve assemblies to permit displacement of cold oil from the tubing into the casing as the hot oil is forced down the tubing by the treating-unit pump.

The same technique as is used for paraffin removal applies in working over tank bottoms. Oil drawn from above the B. S. & W. level is circulated through the heat exchanger and then pumped back into the tank at or close to the bottom level, circulating through the paraffin accumulations there and returning them to a liquid state, in which they may be pumped out and disposed of as directed by composition and pipe-line requirements.

Details of Steam Generator

The steam generator used is as far removed in construction from the usual oil-field boiler as is possible where the ends attained are the same. Instead of a shell holding a large volume of water which must be heated to steaming temperature, the generator consists essentially of a long tube or series of tubes—drawn steel, and tested to high pressures—so connected that water is forced in at one end by the "boiler" feed pump, and emerges at the other end as steam having a pressure of 125 to as high as 300 pounds per square inch, as desired.

Due to the small amount of metal in the tubes and the very small amount of water, steam may be raised in 20 seconds after the unit is started, and the full working pressure of 300 pounds per square inch reached within 2 minutes of the time when starting up the cold generator. The tubing used is hydrostatically tested to 800 pounds pressure, and contains such a small amount of water—or steam—that a tube rupture does not release enough energy to disrupt or damage any of the adjacent equipment.

The unit is oil-fired, burning No. 3 fuel oil or higher grades, the combustion space being above the tubes and with the heat flow counter to that of the water through the coils, insuring dry steam when this commodity is desired.

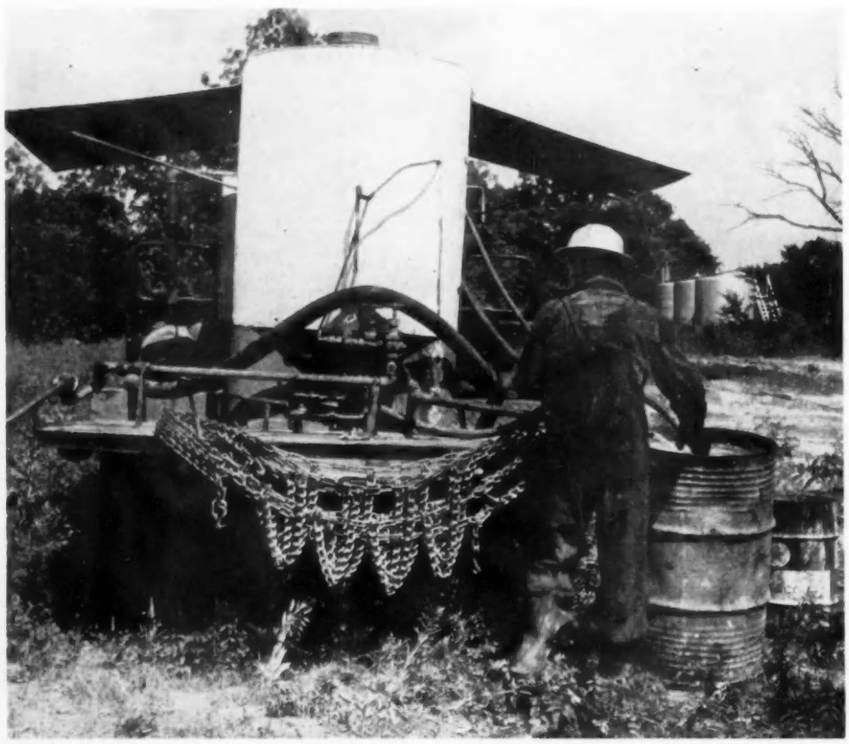
The air-oil mixture is ignited with a spark plug, and is thus confined to the closed chamber above the coils, exit for the gases of combustion being between the coils of tubing and into a smoke box or shell surrounding them. Fan-forced draft is used, fumes being exhausted through a short stack over the unit.

The unit is powered by a small electric motor when current is available, or with a single-cylinder, four-cycle internal combustion engine, generally gasoline burning. This power unit is belt-connected to drive the blower or exhaust fan in the generator stacks, the magneto furnishing current for the igniting plug, and the double-ended pump which is so arranged as to handle water into the boiler tubes from one end, while the other may be used to pick up water for addition to the steam stream, cleaning solution, chemicals or even to handle a flow of make-up water into the storage tank.

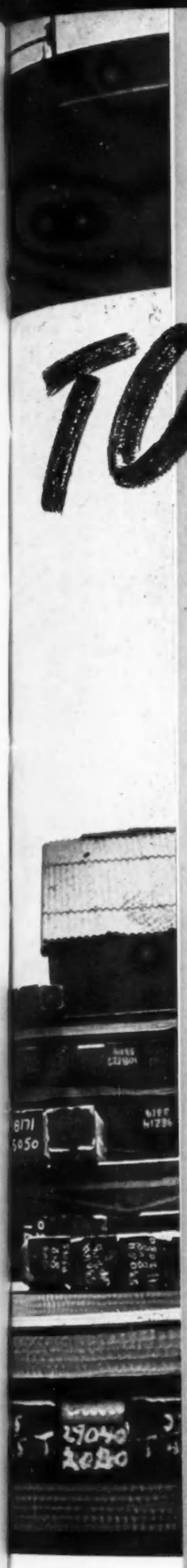
Between the steam-generating unit at the back of the truck and the driver's seat is set a storage tank, divided into two compartments, one holding a supply of fuel oil sufficient for extended firing of the unit, the other and larger section being given over to water storage and holding enough to supply both pumps delivering full volumes for four hours. Since this time is more than is usually required at any of the types of cleaning work for which the unit is designed, it is generally sufficient to replenish the water supply only when shifting jobs, though it may be done without great loss of time simply by disconnecting the steam line and driving the truck to the nearest water supply, if an auxiliary tank on a pick-up or other light trucking unit is not available for such service.

Safeguards are built into the unit which automatically cut off the fire and stop the operating motor if the water pressure drops off, if the fuel flow is stopped, or if the temperature passes a predetermined maximum. Since the blower fan is started at the same time that the magneto is set in operation, accumulation of gases within the generator housing to the point where an explosion might occur is prevented and the space ventilated adequately. Pressure-actuated devices cut off the fuel unless the boiler is filled and either water or steam pressure maintained at the desired setting, it being necessary to fill the tubes with water by a hand pump before starting the operating engine. Otherwise the unit would cut off and remain inactive, thus preventing the tubes from being burnt out by being fired when dry.

Control and checking of the steam generator unit is usually centralized in the truck driver, as the steam unit is idle whenever the truck is in motion, and the truck must be stationary to permit delivery of steam where desired. For tank cleaning, two nozzles may be operated at once from one generator unit, requiring a crew of three men.



Rear of steamer truck, showing working panels lifted and drum used for mixing chemicals with water before injection into steam stream from generator to main service hose. Valve set-up provides desired proportioning of dual flows and permits close check on action.



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THROW YOUR SCRAP INTO THE FIGHT!

Low-Cost Heater Solves Freezing on High-Pressure Wells

By GILBERT M. WILSON, Staff Writer

USING a common domestic-type water heater, a West Coast company improves operating efficiency and eliminates hazards resulting from frozen-up lead lines and manifold fittings of high pressure flowing wells. A minimum of time and equipment, including no specialized apparatus, is involved in the setting up of such a heater unit.

Reduction of flow pressure from 3300 pounds down to a 550-pound-gathering-system pressure was causing the flow manifold to freeze up, due to expansion of gas-distillate production. Collection of ice made it difficult to operate manifold valves, and often caused a stoppage of flow into the gathering system. Freezing would occur at elbows where danger of bursting was most acute.

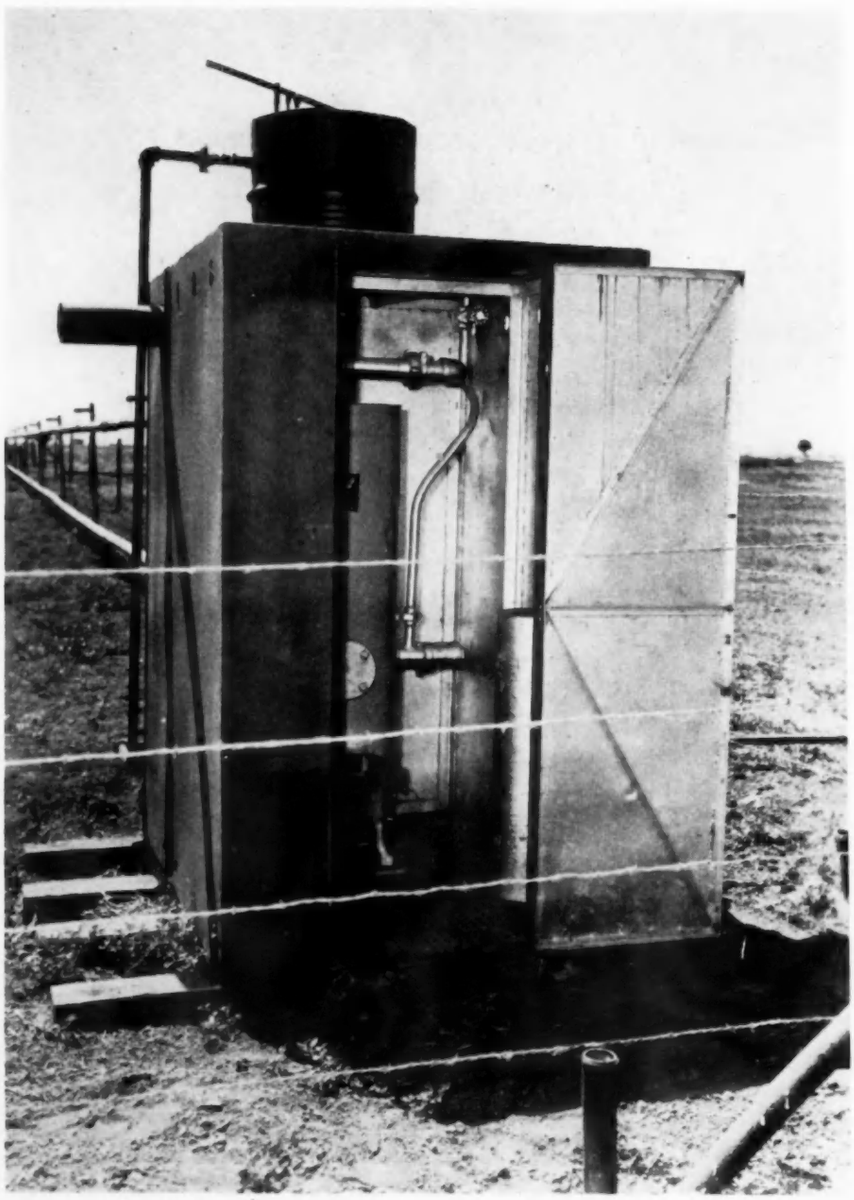
Solution to the problem lay in installation of some sort of hot-water or steam jacket that would hold the flow line temperatures above freezing. Such a system, however, had to be simple and sufficiently automatic in operation to permit its being left unattended for perhaps several days at a time, since the wells are widely spaced, and are some distance from field headquarters.

It was decided finally to use a small gas-fired water heater, set up at some distance from the well, which would circulate water through an insulated jacket welded to the flow manifold, then return to the heater to be reheated.

Domestic Type Heater

The heater is of the type commonly used in apartment houses and industrial plants. It is known as the "booster type," which in this particular size, has a storage capacity of only 18 to 20 gallons. It is not intended to store heated water, instead it is designed to heat up quickly and send it on out into the circulating system. It will give up approximately 115,500 btu per hour, and can heat 162 gallons of water per hour. A moderate temperature is maintained, and it can be adjusted to any point which suits the flow conditions of any particular well. The unit has a 150-pound working pressure capacity.

A small reinforced light steel building houses the heating unit. This protects it from damage by the elements, and permits regulation of the burner so that it will function efficiently with minimum attention. A series of 3-inch holes cut in the walls near the floor and up near the roof provide ventilation, and the vent stack projects outside the



The domestic-type booster heater is enclosed in an all-steel ventilated shelter. Water tank on roof is automatically kept full, allowing unit to remain unattended for extended periods.

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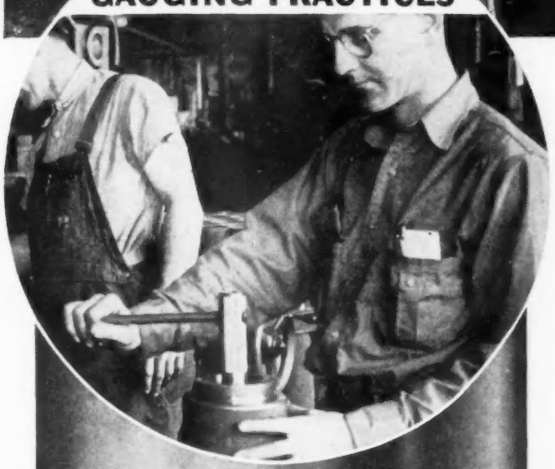

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Careful machining and hobbing of Reed Tool Joint threads assures accuracy and uniformity of the thread form.

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structure. The door to the building may be locked to prevent molestation by thieves or transients.

To insure a constant supply of make-up water being available to the heater, an auxiliary reservoir, consisting of a half-section of a 50-gallon drum was set up on the top of the shelter. Water from a lease water supply line enters a liquid-level float valve near the top of the tank and keeps the tank full at all times. The make-up water line from the bottom of this auxiliary tank extends down through the roof and is tapped into the cool water return line at the point where the latter enters the heater. The fuel gas line enters near the floor at the rear of the building.

Set up on several heavy timbers, and with the several pipe lines provided with unions near the outer walls, the entire unit may be moved from one well to another as producing conditions change and require the shifting of the heater units.

Header Is Jacketed

The well, in the instance of this particular set-up, flows into a 25-foot, 4-inch header set up on supports a foot or so above the ground. The header is swaged down to 3 inches at the end where production enters the field gathering line.

Over this header is welded a shell of 6-inch pipe, which leaves a 2-inch annular space around the header through which the hot water circulates. Because the three lead lines coming from the well Christmas tree—two from the tubing and one from the casing—must be welded solidly to both the header and the 6-inch jacket, it was necessary to install three expansion couplings in the outer shell to allow for expansion and contraction caused by temperature changes.

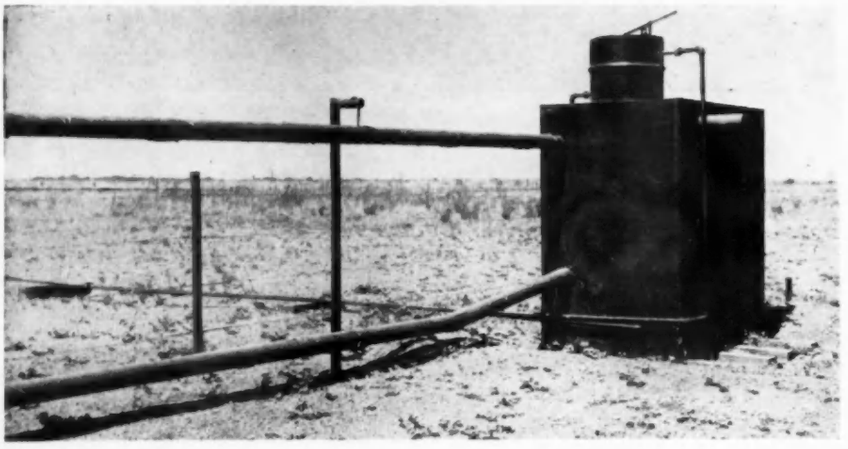
The heater is located approximately 150 feet from the well, and is connected with the header by two 1½-inch lines. The overhead, or hot-water line, enters the manifold on the downstream end, and flows counter to the direction of the well flow, thus imparting heat more efficiently to the cold gas and oil. The cooled water returns to the heater through the lower line.

Utilizing the familiar principle of the thermo-syphon, the circulating flow of water is automatically maintained. A slope of about 2 feet in the 150 feet of each line allows the heated water in the top of the heater to flow downward to the manifold, and the cooled water to flow downward toward the heater. The upper line slopes toward the manifold, and the lower toward the heater.

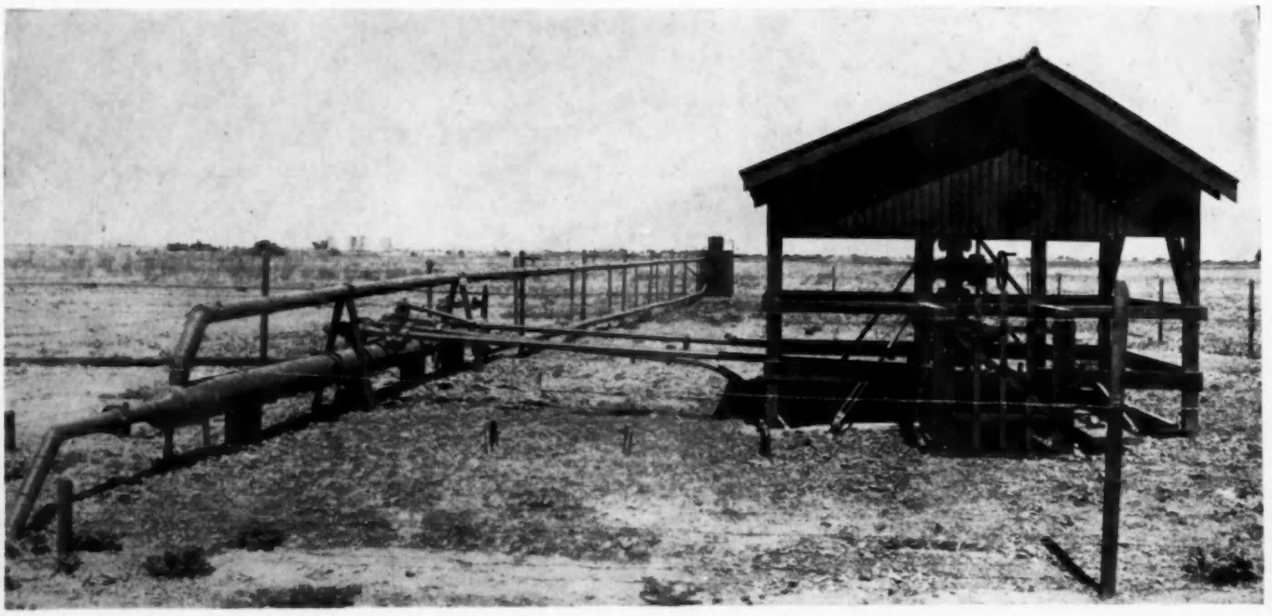
Located in the hot-water line, close to the heater unit shelter, is an automatic air vent control. This regulator keeps the circulating system air-free, and assures smooth functioning of the system.

Both water flow lines and the well manifold are heavily insulated with a magnesium insulating material. The lines are supported by vertical 2-inch pipe supports placed at 20-foot intervals along the line. The lower line rests on a short horizontal arm welded to the support, and the upper line is suspended by a free swinging arm looped over a horizontal projection of the pipe support.

Several of these heating units have been installed by this company, and excellent results have been obtained. Initial low cost of the equipment, plus the fact that it is nearly 100 percent salvageable and can easily be moved and set up on any well, have contributed to the economical application of this type of field heater.



Jacket surrounding flow header and flow lines extending between heater and well header are heavily insulated. Hot water circulating through the system effectively prevents the formation of ice caused by expansion of high-pressure gas.



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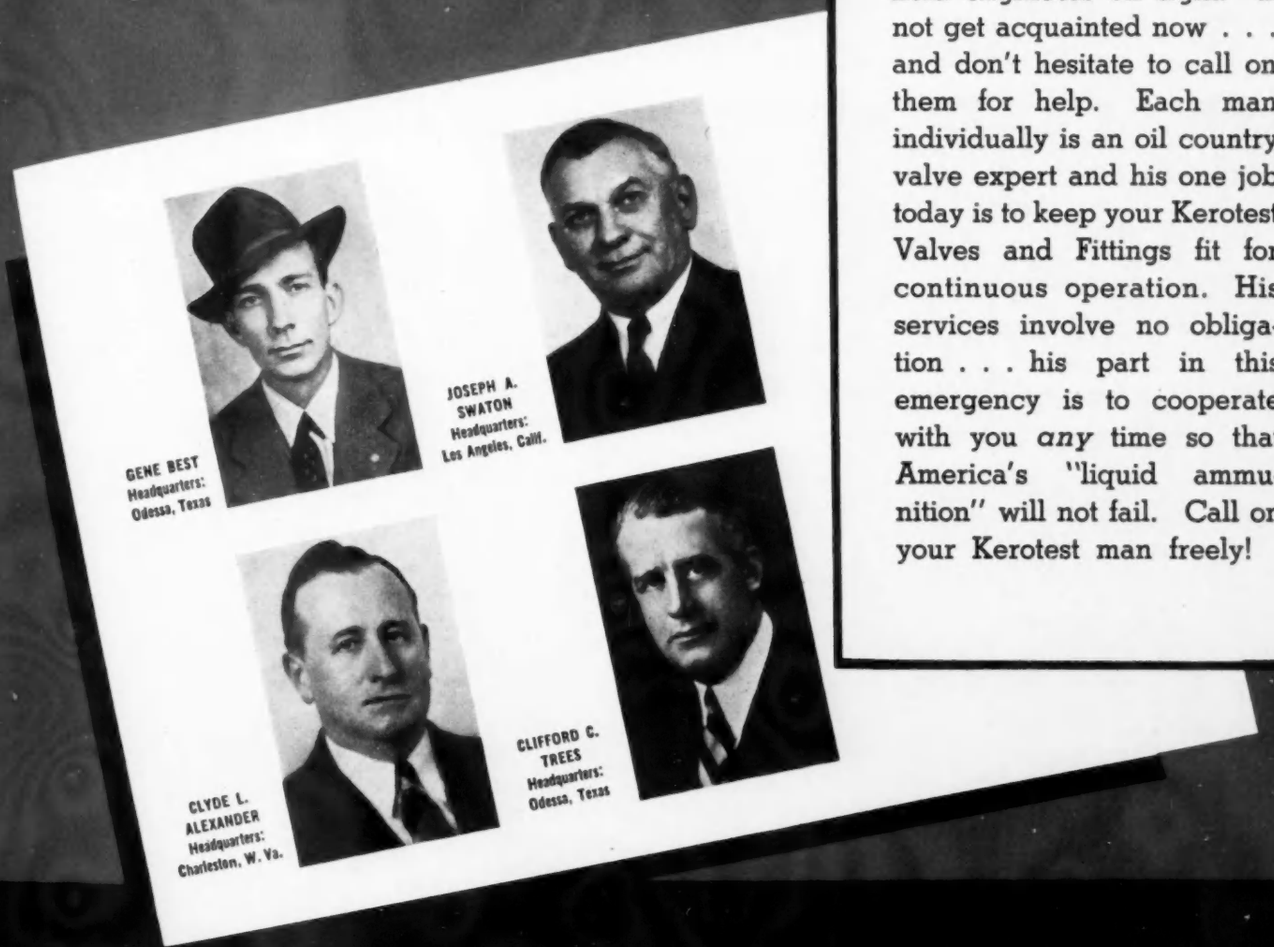

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Special Bottom-Hole-Pressure Truck Has Advantages

By JOHN C. ALBRIGHT

WHEN upwards of 40 or 50 producing wells are to be tested frequently to determine reservoir conditions, a vehicle especially equipped with all the necessary instruments and other equipment essential to performance of this operation will be found an economic and operating advantage. This has been the experience of Barnsdall Oil Company in the Pico Canyon field of California, where it is the principal lease owner.

The unit employed by the firm for this work is a light weight truck onto which has been placed a special body fitted with trays, bins and drawers for tools and spare parts, plus all necessary equipment for testing and determining bottom-hole pressures. Included in the equipment is a self-contained mast, thus eliminating the need for individual masts or tripods at each well, and thereby releasing material that can be used elsewhere. Also included is the equipment necessary for testing and checking the indicating pressure gauges.

The mast is carried on a heavy steel supporting member bolted securely to the back of the chassis frame sills and resting upon the rear bumper for additional support. The supporting member is massive enough that the truck can be driven over rugged terrain with the mast raised without danger because of side-sway or tipping.

A hand crank operated hoist or winch, attached to the base of the mast where a heavy gusset is welded to both the mast and supporting member, is used to lift the bottom-hole bomb lubricator nipple to position above the top of the tubing and lower it again after the test has been completed. The bottom of the bomb lubricator is permanently equipped with the female side of the union so that making up and breaking out a half-union each time a test is made may not be necessary. The top of the lubricator is fitted with the conventional sheave, bracket, stuffing box and gland through which the wire line passes when the bomb is lowered into and raised out of the tubing. Large handling bailers are welded to the sides of the lubricator to facilitate spotting over the top of the tubing, and these may be used as a ladder when it is

Truck in position at well site, with lubricator barrel fastened in place with unions and ready for a bottom hole pressure test to be made.

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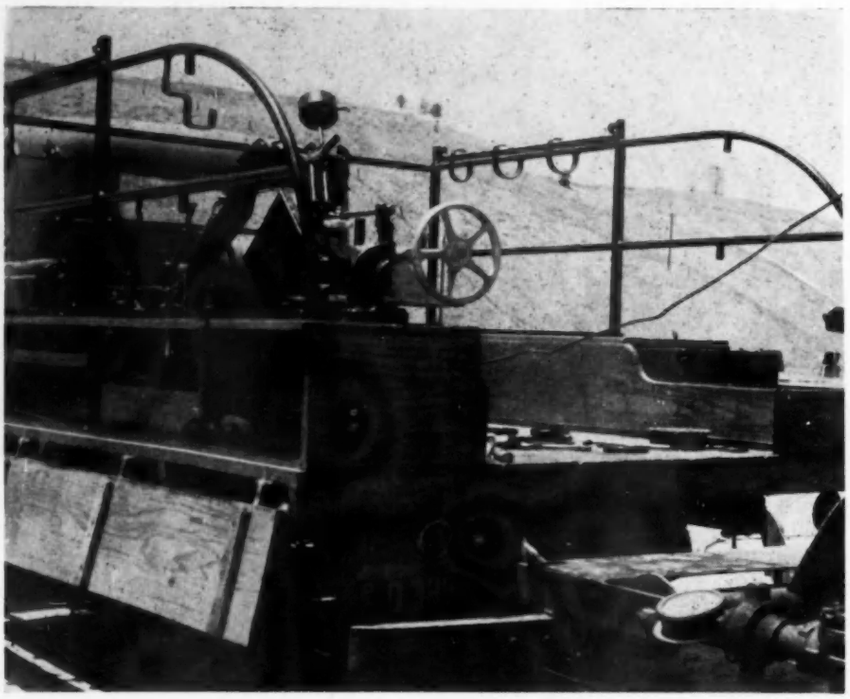


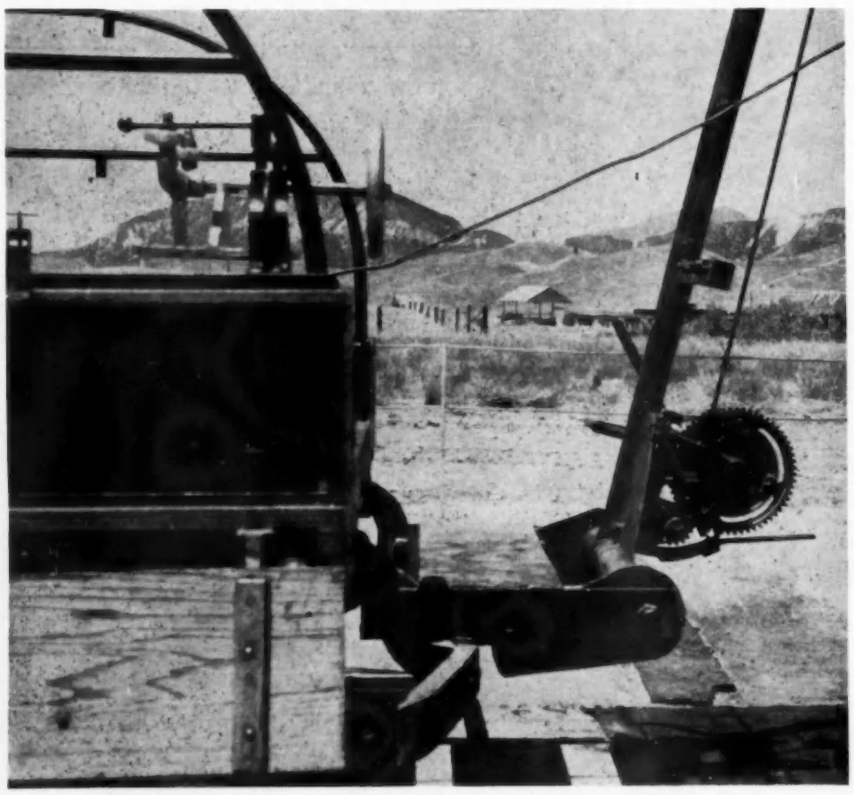
Rear of test truck with hydraulic pressure gauge test unit clamped in pipe vise on raised platform. Wire line for lowering and raising bottom hole pressure bomb is handled with drum just behind driver's cab and operated by transmission power take-off.

necessary for an employe to climb to the top to make adjustments or repairs.

The mast is attached to the carrying bracket in such a way that it tilts backward at an angle beyond vertical, thus placing it over the top of the Christmas tree without having to jam the truck against the well-head controls. A cross member is welded to the top to carry the sheave for the soft laid wire used with the winch. Two brackets attached to the mast, one slightly below the middle line and the other near the base, are used to carry the bomb lubricator nipple when traveling over the lease. These are half-round to fit the lubricator snugly. Bolts tacked to the ends of the brackets pass through a locking bar to prevent the lubricator from swinging out of place.

The reel for the wire line used in lowering and raising the bomb is mounted just behind the cab of the truck and takes its power for operation from the transmission of the truck. The truck operator with one helper can easily make the necessary connections to run a bottom hole test in about 45 minutes.

Wells completed by the company in this field are equipped with Christmas trees of like design, and future completions will be fitted with similar equipment. Three main control valves comprise the equipment above the casing-head, one below the tee on the flow line take-off, another on the choke line and above the tee is a third that is used when running the bottom hole pressure bomb through a lubricator. If the top valve has flanged ends, a nipple is made up in the companion flange to attach the male end of a heavy-duty union. If the valve has screwed ends, the nipple is made up directly into the valve, but the union set-up is identical in all cases. The type of union employed is one that may be operated with a ball-peen hammer instead of a pipe wrench. On some wells an entire union is left on the top of the tubing nipple and closed with a plug to prevent dirt from entering the well above the closed gate valve.



Hand operated winch at base of mast used to raise and lower lubricator barrel.

Plugging Air Channels With Floating Sand

By F. R. COZZENS, Equity Oil & Gas Company

OIL recovery by air-drive, first practiced on a commercial scale by I. L. Dunn, near Chesterhill, Ohio, in 1911, has gained steadily in popularity and is today one of the outstanding methods of reclamation in the eastern stripper fields. As in other recognized recovery measures, certain obstacles must be met and overcome, the initial one in air-pressuring being that of "floating sand" or sand particles loosened from their cement binding and carried along with the fluid. The operator who has raised and cleaned working barrels clogged with floating sand, or skimmed from storage oil, gobs of the slimy residue which have found their way up the tubing and out through the lead lines needs no further introduction, but experts in mining research have discovered recently that aside from being a nuisance, floating sand is likewise a reliable indicator of sand-channeling. From their discoveries, plus authoritative tests under actual field conditions, the use of floating sand as a plugging material has very favorable possibilities for control of sand-channeling which is by far the most stubborn problem encountered in air-pressuring.

Since air introduced under presture against a sand-face follows lines of least resistance, certain porous sections are washed out and channels enlarged through the sand body so as to permit an excessive flow of air from the intake well to certain producing wells within the pressured area. Where this condition becomes quite pronounced it is impossible to build up a uniform air-flow through the sand-body and unless some remedy is made effective the intake well must be abandoned and air introduced from another source. In extreme cases, it may, and often does become necessary to abandon the use of air over the entire area. Many productive oil sands are not of sufficient thickness to permit the use of packers for the isolation of channeled portions, and due to war restrictions, operators of the more favorable sands are unable to buy the metal and other materials necessary for an isolation job. It is therefore logical that more attention be given to ways and means of plugging off offending channels, and especially to a plugging agent which does not drain excessively on labor and equipment. Floating sand has these and other good features of a workable plugging agent, inasmuch as it remains suspended in fluid over a reasonable length of time, and can be forced with that fluid into any section of the sand body. It may be utilized with the air pressure and pumping equipment already installed on the job.

The sand-plugging procedure is generally carried out by releasing the air pressure on a badly channeled intake well, and pulling any packers which may have been seated in the sand. Fresh, crude oil, into which has been vigorously stirred floating sand, (proportions being one measured gallon of floating sand in normal pasty form, to each fifty gallons of oil), is introduced into the well until the chamber at the bottom is filled. Connections are replaced at the casing head, and air from the compressor unit is forced into the well until sufficient pressure has accumulated to force the oil and sand-residue back into the sand body. Length of time and amount of pressure required for the task depends upon conditions existing in the sand area. One to three days of continuous forcing, at a built-up air pressure of 100 to 300 pounds, are the average ratio for most districts. After fluid and plugging residue has been thoroughly forced into the sand, the air pressure is released at the casing-head, and the chamber is re-filled with clean oil. Pumping equipment is next installed with necessary connections so that the well can be circulated freely for 24 to 36 hours, then pumped dry. Oil circulated by the pump washes the face of the chamber free of floating sand which has accumulated upon it during the forcing process, but greater quantities have normally been pushed back into the larger sand-channels where the material remains untouched by the reservoir washing. The treated well is now available again for air induction, and when air is introduced in regular pressuring, offending sand-channels will be found completely closed in most cases. Continuous pressuring tends to seat the sand-plugging more firmly into the channels, and since the plug is not affected by oil, water, or acid, as are some types of other plugging materials, results are permanent. Should one treatment not close the troublesome channels completely, the same procedure is repeated until desired results are obtained.

Where a sand body is of sufficient thickness, and the operator desires to use packers in connection with the sand-plugging method, the circulation of oil by pump is unnecessary, since the channeled portions can be isolated so as to receive the oil-and-sand-plug direct, but if the entire face of the chamber is treated it is often possible to eliminate the use of one or more packers. In areas where lower portions of a sand body are saturated heavily with salt water, it is easy to seal off the water sections completely by the use of the same oil-and-floating sand method. The plan works equally well in either continuous or intermittent air-pressuring, and while the plugs do not prevent the forming of new channels in a sand body, they enable the operator to build up and hold a far more uniform pressure which increases oil production and lengthens the life of the recovery process. An ample supply of floating sand for plugging purposes is usually available on every pressuring project without cost, and the wells can be treated by the average field-crew without the use of any restricted materials or equipment.

Industry Fights

[*Continued from page 12*]

$200,000,000 of additional revenue, which at the present rate of expenditure would run the government less than 1½ days. If the Secretary by any chance is wrong, the loss to this nation cannot be measured in terms of money. If our supply of oil is inadequate, it will at least prolong the war—at a cost not measured in dollars but in the lives of our fighting forces. If our supply of oil is inadequate we might even lose the war, and it is impossible to calculate what that eventuality would cost."

Fell summed up the situation as falling into seven propositions, as follows:

1. It has long been the policy of Congress to encourage the exploration and development of petroleum reserves by providing in the tax law reasonable incentives for exploration and assurances of some relief from the unusual hazards of the business.

2. The wisdom of such a policy has been demonstrated by the accomplishments in the finding of new reserves and by the development of new methods for the recovery of oil from the existing reserves during the past 25 years.

3. The present known reserves, although great, are not sufficient for the safety of the nation and its allies.

4. The continuation in the tax law of the existing incentives and assurances is more important than ever, not only to encourage exploration and development, but to maintain the production from thousands of wells that might otherwise be abandoned.

5. Percentage depletion, and the right to deduct intangible drilling and development costs in the year in which they are incurred, have proven to be a practical and reasonable means of providing such incentives and assurances.

6. The suggested substitute methods are impracticable, and if adopted, would destroy the incentives now existing.

7. The revenue to be gained through abandonment of the established provisions is far too small to compensate for any threat to our petroleum supremacy, particularly during the greatest war in history.

Eastern Area

J. E. Moorhead, executive manager of the Pennsylvania Grade Crude Oil Association, scheduled as the witness to follow Fell, died suddenly in a Washington hospital the day before the hearing, and his testimony was submitted by George W. Holbrook, president of the New York State Oil Producers Association.

Moorhead's testimony would have dealt with the Pennsylvania field situation, where the right to expense intangible drilling costs, Holbrook said, is more important than in other areas because of the great cost incident to the secondary-recovery methods now being pursued.

Repeal of the present provision of law, he said, would threaten the whole four-state industry, possibly to lose forever millions of barrels of the finest lubricant-grade oils in the world.

A. K. Swann of Evansville, Indiana, representing the Tri-State Petroleum Association, testified on the greater need of the independent wildcatter for the depletion allowance than that of the major company.

Hitler today is "trading blood for oil" in his fight for the Caucasus fields, Senator Lee of Oklahoma told the committee.

The industry has never profited excessively as a result of the law, Lee declared, but exploration and development has been encouraged, and any change would threaten the "eventual ruin" of the small operator.

Lee's position was supported by Senators Thomas of Oklahoma and Kilgore of West Virginia and by Governor (formerly Senator) Neely of the latter state.

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Government Must Recognize

[Continued from page 16]

which items are well worn out but with some service left in them, he cannot realistically figure that he has in them a present investment of $50.

The oil industry's *net investment*, making allowance for depreciation and obsolescence of physical facilities, proves to be only a little over one half the amount of the *gross investment*, as brought out in accompanying tables.

Either net investment or gross investment includes about 1½ billion dollars tied up in inventories of crude oil and products and in working capital. But net investment in plant is only one half as great as gross investment in plant. The latter relationship reflects the fact that over the years, the industry is constantly in process of wearing out old facilities and replacing them with new, using facilities at all stages of usefulness, from 100 percent to zero, with the average value midway, or at 50 percent of original cost.

Oil Investment Overrated

The net investment of the petroleum industry in the United States in 1940 totaled $8,180,000,000, according to a tabulation presented before the American Institute of Mining and Metallurgical Engineers by John D. Gill and James S. Weatherby, of The Atlantic Refining Company. The table was based largely on data embodied in prospectuses supplied by oil companies to the Securities and Exchange Commission and in financial and statistical reports issued by oil companies. The total included $6,656,000,000 net investment in plant and $1,524,000,000 in other assets, principally inventories of crude oil, products, materials, and supplies and net working capital. Shown separately in the table, which is published herewith, are the amounts of net investment in the various divisions of the industry. Also presented are figures on gross investment in the industry, similarly broken down by divisions.

Relative sizes of investment in the different divisions of the industry are conveniently shown on a gallonage basis. For each gallon of crude oil produced during the year, there was a net production plant investment of 6.07 cents; for each gallon of product refined, there was employed a net refining plant investment of 1.67 cents; and for each gallon of product sold, there was a net marketing plant investment of 2.56 cents.

Showing that the industry's investment actually is much smaller than heretofore generally believed is not proving, of course, that it is as small and conservative as it could be and should be.

And irrespective of figures that may be offered, there will continue to be criticism of certain phases of the industry's set-up, with heavy emphasis on alleged unnecessary investment in producing and marketing facilities. Critics particularly condemn "unnecessary" drilling of wells and "unnecessary" service stations.

Nevertheless, taking into consideration the available measures of the efficiency of the use of capital investment and the various serious handicaps over which the industry has no control or only limited control, it is indicated that the industry's over-all investments have been quite prudent, conservative, and justifiable.

Merely a casual familiarity with the production division largely absolves the industry of primary responsibility for waste of investment in excessive drilling of wells. The industry admittedly has drilled more wells than scientifically necessary for obtaining the crude oil contained in the pay formations. The industry was the first, however, to recognize this fact, and it has done practically all within its power to establish wider spacing and to eliminate excess drilling. It has accomplished much in this direction. There are many fields in the United States with uniform 20-acre or 40-acre well spacing, developed in line with technological ideals. However, under the laws of land and mineral ownership and the laws regarding protection of property rights, it is not legally possible for the industry to drill wells always on the efficient spacing patterns that it would eagerly use. The industry does not make the laws. But it must operate under them.

It is in connection with over-development of marketing facilities that the most valid criticism of the industry's investment is offered. However, even in that matter, all the arguments are not on the side of the critics. The public doubtless could be efficiently served by fewer service stations and fewer individuals. But it likewise could be served by fewer grocery stores, shoe stores, and most other retailing establishments. It does not seem quite fair to single out marketing of petroleum products for criticism, when distribution generally is constantly criticized for not being as efficient as possible. Furthermore, petroleum economists, taking a long-range view of oil marketing, feel that narrow margins brought about by over-expansion of outlets in the past ultimately will retard further expansion and force a more efficient basis of investment in marketing facilities, with each unit handling larger volumes of sales. In fact, they feel, this is the only way that more efficient use of capital in oil marketing can be forced, declaring that arbitrary or artificial regulation would only prolong the adjustment.

It is significant, moreover, that criticism of oil marketing is mostly academic or political and rarely voiced by the consumers who are served. Out of the many and well-equipped service stations, the public has the advantage of excellent and prompt service, necessarily offered at reasonable prices by reason of intense competition. The public would not be satisfied with the slow service and inadequate facilities that would be necessary in the event of too much whittling down of the investment in marketing.

Marketing Investment Small

Finally, with regard to criticism of alleged over-investment in marketing, it should be pointed out that the net investment in marketing plant, as shown in the accompanying table, is not a predominant part of the industry's total investment, constituting only 21 percent.

Granting that there are possibilities for carrying out operations of the industry with less capital investment per unit of output, particularly in the producing and marketing divisions, it is a fact that the oil industry has a better record than industry in general in having steadily increased the productivity of its investment during the past 15 years. In 1941 the industry required only 64.5 percent as much investment as in 1927 for providing a given unit of output, having steadily lowered the necessary investment in the meantime. Industry as a whole, in contrast, showed no material improvement in the relative productivity of its investment from 1927 until the present war broke out, whereupon it naturally began to get strikingly more efficient use out of existing plants, with demand for war goods virtually insatiable and with facilities worked abnormally—in some instances 24 hours a day for 7 days a week. Even so, industry in general failed to show as much improvement in the efficiency of its investment in 1941 as did the oil industry, having required 69 percent as much investment per unit of output as it did in 1927, as against the 64.5 percent for the oil industry.

These figures are from the accompanying table (which also is partly charted), showing indexes of investment and output of 24 oil companies and of 400 industrial corporations, based on data for 1927 as 100 percent. In 1941,

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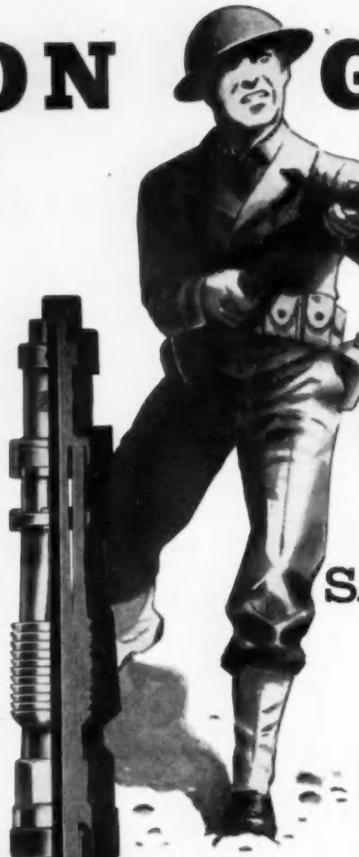

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investment in the oil industry, as measured by the net worth of 24 companies, was 109.6 percent of that in 1927; while output, as measured by crude runs to stills, was 170 percent as great as in 1927, indicating that investment per unit of output was only 64.5 percent as great in 1941 as that used in 1927. The investment of industry in general, as measured by the net worth of 400 industrial corporations, was 112.4 percent as large in 1941 as in 1927; while output, as measured by the Federal Reserve Board index of industrial production, was 164 percent as large in 1941 as in 1927, indicating that investment per unit of output was 69 percent as great in 1941 as in 1927.

These indexes show that while the industry may have room for further increasing the efficiency of its use of capital, it nevertheless has done remarkably better than industry in general in getting increased production out of a given amount of investment.

This result has been achieved, evidently, under the pressure of the intense competition that characterizes the industry. Goaded constantly by the need to lower prices and meet competition, the industry actually has succeeded in lowering prices of its products relatively more than industry in general has done; and importantly instrumental in that success has been the saving made in use of capital investment.

Meanwhile, under the intensely competitive conditions, companies which have not efficiently minimized their requirements of capital investment have lost out through excessive operating cost or have been forced ultimately to effect the economies in investment necessary to stay in business. But conversely, companies which have too drastically limited capital investment have lost out through being forced to offer inferior products and poor service or have been obliged ultimately to provide the adequate investment necessary to continue operating.

In the midst of those opposing forces, the industry necessarily has avoided both over-investment and under-investment, with the result that the existing investment probably is approximately as it should be and has to be.

In summary, the oil industry consistently has had only moderate profit, in reflection of intense competition, and not in reflection of wasteful or extravagant investment. And inasmuch as its net income has represented a lower-than-average return, it is less able than industry in general to afford diminution of earnings; while any control causing operation at a loss undermines its ability to provide the petroleum products essential for prosecuting the war.

HOW AND WHY
WILLIAMS' TOOLS AID WAR PRODUCTION

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DATA ON "VULCAN" CHAIN PIPE TONGS

There are 6 types of Williams' Tongs, each offering certain advantages for particular classes of work. A knowledge of the features of these various types will enable users to better select the most efficient and economical type for the work at hand.

"VULCAN SUPERIOR": A universal service tong for *both* pipe and fittings. Has Reversible pipe-and-fittings jaw. Seven sizes, up to 12" capacity.

"VULCAN": The original "VULCAN" Pipe Tong—still the favorite oil-field tongs for general work. Chain swings from center and can be used on either side of the jaw. Eight sizes, up to 18" capacity.

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The "V" recess in "Vulcan Superior" jaws assures quick, positive grip on fittings.

Types of "Vulcan" Chains

While "VULCAN SUPERIOR" and "VULCAN" Tongs are furnished with *either* Flat Link or Cable Chain, all other types have Flat Link Chain only.

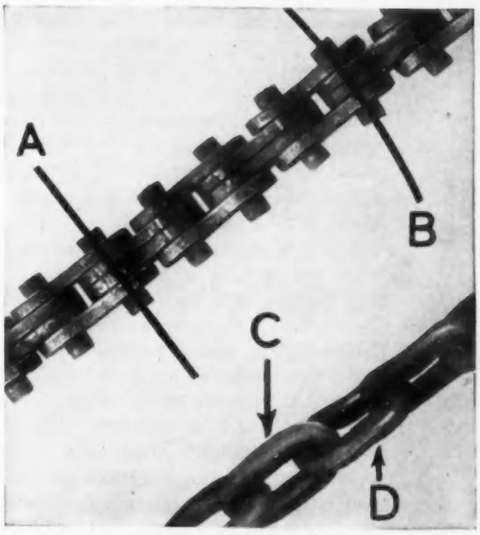
There are three types of Flat Link Chains for Williams' Tongs—"STANDARD", "XTRA-STRONG" and "SUPERCHAIN". "Standard" Chains are regularly furnished with all except "Supertongs" but "Xtra-Strong" Chains, providing approximately 40% greater strength, can be supplied at additional cost. "VULCAN SUPERTONGS" are regularly furnished with "Superchains". Every "VULCAN" Chain, regardless of type, is individually *proof-tested* on a standard tension machine to two-thirds of its breaking strain.

Use and Care of Tongs

In using Chain Pipe Tongs the best gripping position is that which is midway of the jaw teeth, or rearward therefrom. The bending of the tong handle under load is not evidence of a defect. Such bending is intended to act as a warning and "safety valve" in advance of breakage of chain, which would incapacitate the tool.

In Flat Link Chains on tongs, an occasional inspection of the first two or three rivets and links adjacent to the swinging, or anchor link should be made, since the load is greatest at that point. Badly bowed, or curved rivets indicate that the chain has been loaded almost to breaking strength and is probably unsafe.

In Cable Link Chains, the links give warning by stretching and pulling "rigid" if the breaking point is approached.



A. Straight rivet indicates chain is safe.
B. Curved or bowed rivet—unsafe.
C. Safe link indicated by normal shape.
D. Link stretched or pulled "rigid"—unsafe.

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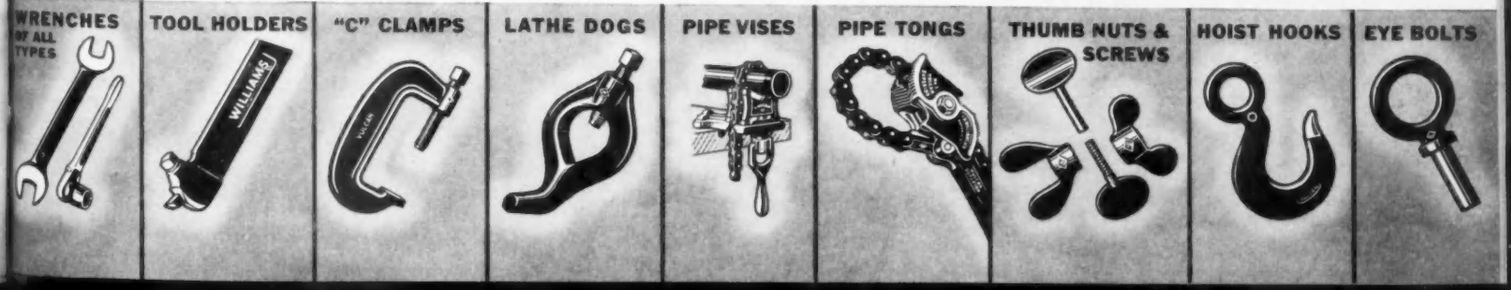
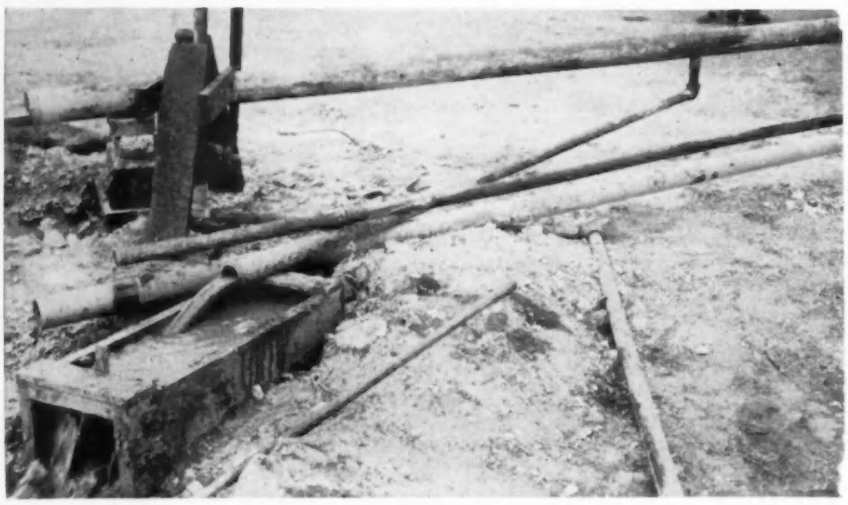


PRACTICAL OPERATING *Hints* FOR

1. SAMPLING

Continuous Collection Assured by Bypass



Branch tied into bottom of mud flume, while possibly taking excessive amount of cuttings for volume determinations, provides continuous returns for immediate formation identification.

INSTEAD of taking grab samples from the mud returns at periodic intervals, one company uses a means whereby a continuous sample may be taken, and from the latter, a composite then may be secured.

Some distance from the end of the mud return line, a hole is cut out of the bottom of the large line, and a 2-inch collar then welded around it. A 2-inch nipple, elbow, and long line leading away from the collar convey a representative sample of the mud returns over to a small settling box. This box, located on the edge of he mud pit, has a slide gate on the discharge end of it, and after a representative sample of the cuttings has been taken up by the men attending this operation, the remainder of the material may be flushed on out into the sump, leaving the box clean and ready for another sample.

This type of sample-taking is especially suited to wells where ample space for settling ditches is available, and no shale shakers are necessary in order to assure adequate settling out of the formation cuttings from the mud flow.

2. TRANSPORTATION

Special Bin Becomes Working Floor Addition

COMBINING a means for transporting much small equipment required at the drilling rig with a practical extension of the working floor, one drilling contractor operating A-frames in Illinois has worked out a practical aid.

On a sturdy skid frame of junk pipe is welded a bin, floored and with sides of tank plate, with continuous beads around three sides of the bottom and up two of the corners across one long side. This prevents loss of small parts en route between locations.

The other side is made to slip within the corner posts, and to lock in place with hooked pins fitting into the pipe post tops. Arrived on location, this movable side is lifted, permitting ready access to the equipment, and at the same time leaving the floor of the bin, as cleared, to be used as extension to the congested derrick working space.

3. DRIVES

Lifting Jack Serves As Belt Tension Unit

PROPER tension in the V-belt drive between gas engine sheave and mud-pump pulley is necessary if full power is to be delivered and if belt service is not to be curtailed by overstressing or slipping.

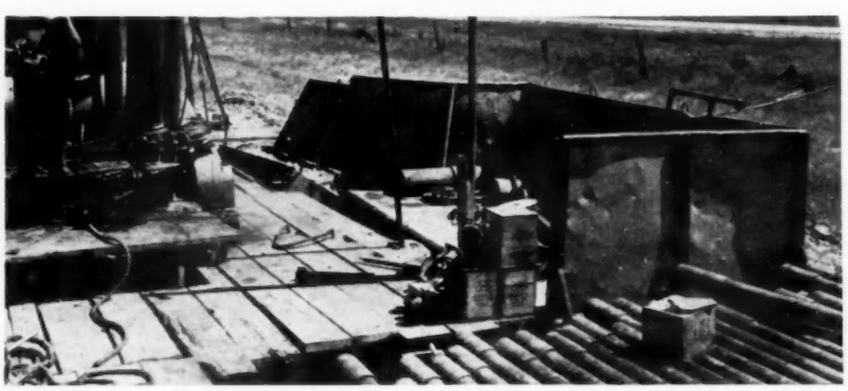
One drilling contractor, operating a set-up on the average of 10 days on a location, dispensed with more elaborate tensioning devices in favor of an ordinary house-mover's jack, setting the unit between the end of the engine skid and the reduction gear housing of the pump.

Use of blocking to hold the jack at proper height on the pump and distribute pressure enables the jack to be so set laterally as to counterbalance any effect of the V-belts to pull the pump unit out of line.

The base of the jack is altered slightly by tacking two short lengths of welding rod across it so they will normally span the end member of the engine skid. These slight protuberances from the jack base do not interfere with its normal use as a lifting device around the

THE practical operating hints for the drilling rig, production man and pipeliner, appearing regularly in these pages, are secured from oil operations everywhere and offer suggestions that will help to improve operating efficiency and safety.

The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, The Oil Weekly, Houston."



With tight floor and three leak-proof sides, a fourth section makes this unit available for small parts transportation and, with side removed, serves as an extension to slim-hole rig floor.

Equipped with spurs to contact skid brace, this jack provides necessary shift of pump when belts need change.

rig, but serve effectively in preventing the gradual shifting downward of the unit through normal vibration under operation of the reciprocating pumps.

4. *RIGGING-UP*

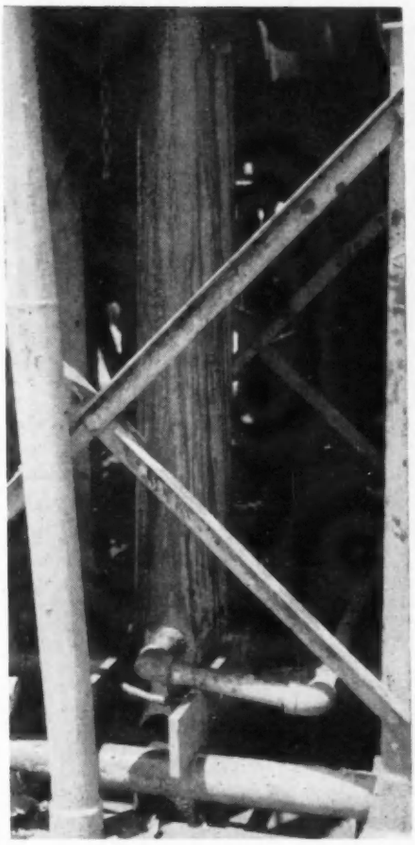
Self-Setting Rathole Saves Drilling Time

SPEEDY and economical handling of the rat-hole pipe is a routine procedure on the drilling rigs of a large company, as a result of a relatively new method.

In this particular area surface formations are very soft and friable, so little effort is required to sink a bore for the rat-hole pipe. It is so soft, in fact, that instead of going to the trouble of setting up the rotary table on blocks and actually drilling the hole with a large bit, the pipe itself is equipped with a bit on the bottom, and with the aid of a special adapter that permits attaching the rotary hose to the top of the pipe, mud pressure alone is used to hydraulic the pipe down.

On the derrick floor, two men with large size chain tongs turn the pipe a little whenever the latter becomes hung up temporarily on a hard layer. The bit on the end of the pipe then takes hold, cutting through that section, while the mud carries away the excavated material. Outside of this slight aid, no other force except the weight of the pipe itself is needed to lower the rat-hole pipe.

The pipe is guided into place at ground level by a pair of ¾-inch steel plates set up on edge, and which rest across a pair of short heavy lengths of drill pipe. This drill-pipe base assembly is welded in place inside a square enclosure of 6-inch channel iron. Two large steel nuts welded to either side of the rat hole pipe come to rest upon



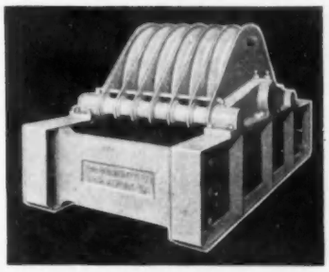
Cutting edge on pipe aids hydraulic force in placing this pipe without need for rotary table or rig power.

the edges of the two steel supports, thus assuring that the pipe will be set at exactly the same level each time it is placed at a new well.

To prevent the pipe from overflowing on the derrick floor every time the kelly is lowered into it, an overflow line is welded into the side of the pipe just above the base assembly to hold the fluid level at some distance below the top of the rat hole. This 2-inch line empties into the cellar.

When the derrick is skidded over to the next location it is necessary only to lift the rat-hole pipe up into the derrick until the bottom clears the ground, and cinch it there until it is ready to be sunk into place at the next well.

BREWSTER
CROWN BLOCKS



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PRACTICAL OPERATING *Hints* FOR

1. *BUILDINGS*

Camouflage Painting Protects Pump Plant

TO MAKE important buildings less easily recognized, especially from the air, sides, ends and roof are painted in various designs, black and white paint being most generally employed.

When the paint is applied in uneven bands, horizontally, vertically, or at varying angles, depending upon nearby structures, vegetation and topographical contours, the deception or visual confusion created renders the outlines of the building indistinct at distances of a few hundred yards, and the entire structure unrecognizable at half a mile or more.

Painted extensions of irregular planting and hillside shadows blend to prevent ready aerial identification.

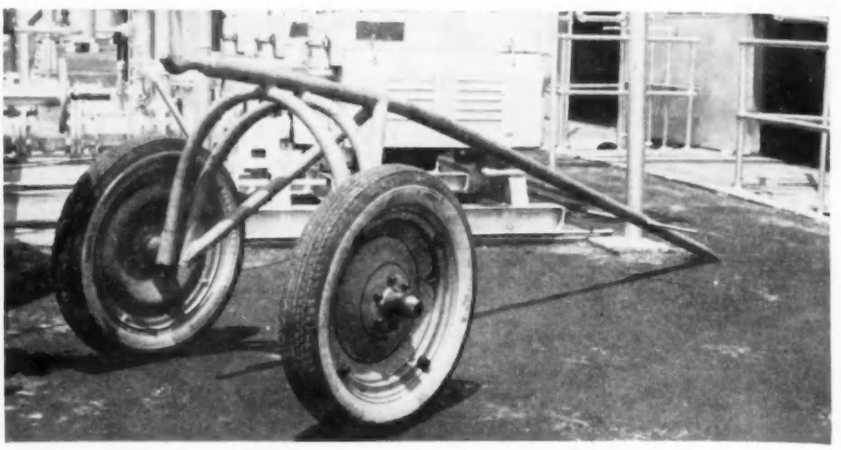
Such camouflage requires no outside accessories, does not interfere with plant activities, and if proper grades of paint are used, surfaces are well protected from weathering and corrosion.

2. *MAINTENANCE*

Special Buggy for Moving Heavy Units

WHEN cylinders, pistons and other heavy parts are to be moved from one point in a station to another, or to and from the warehouse, a two wheeled cart can be very useful when so constructed that the load will be balanced between wheels.

Front spindles and wheels from a wrecked automobile are attached by welding the spindle body to heavy duty pipe previously bent to the required shape. Two yokes are used with this cart which have a long tongue attached across the top of each and braced with two short pieces of pipe welded to the base of the rear yoke.



Welded up from bent pipe sections, with front wheel spindles from wrecked car as supports, this unit enables regular crew to transport equipment which otherwise would demand more men.

A shallow hook on the short end of the tongue is used for hooking the lifting chain while the other part of the load can be pulled up to the long end of the handle behind the yokes with boomers or looped chain. Cross bars near the extreme end of the tongue are used as hand holds, while a hole in the flattened end can be attached to a lease car to move the cart and load distances greater than convenient for the operator to pull by hand without undue straining.

3. *LOADING RACKS*

Folding Hand Rails Better Walkway Use

THE usual counterweighted connecting walks from loading racks to tank car running boards may be more safe by attaching hand rails at one or both sides of the walk. Vertical stanchions at the end of the rack with cable or rope strands between rack walk and stanchion are sometimes used, but the stanchion and looped line present a haz-

With all junctions pivoted, and various sections proportioned to length of walkway, this railing folds up clear of the railroad right-of-way, yet affords secure support for men when loading.

THE PIPELINER

ard when turned back over the rack when not in use.

Since the walks stand about vertical when not in use, automatic folding of rigid rails is possible by pivoting the stanchion at its base and by carrying a rigid rail, also pivoted with a single bolt at either end, between rack rail and stanchion.

When the walk is raised, with this type of railing, the stanchion tends to fold upward in prolongation of the walkway, and the railing to stand vertically alongside the walk, requiring a minimum of space and presenting no obstacle on the main platform. The entire railing jackknifes readily, any variation in link lengths being absorbed by the flexibility of the arrangement.

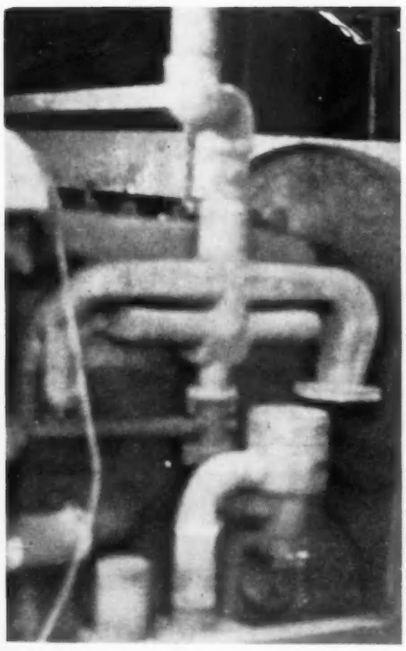
4. POWER UNITS

Shift in Manifold Eliminates Pipe Run

WHEN a four-cylinder engine was altered for use in driving a gathering line pump the exhaust manifold on the unit delivered gases downward, requiring a complete reversal of flow if the exhaust were to be led through the roof of the pump house.

To avoid this extra pipe with its consequent possibilities of leaking joints and accident hazards, the original engine manifold was altered by the company welder to provide discharge of the exhaust gases from the center of the horizontal run, a riser being welded at this point which carried a vertical section through the station roof.

The former exhaust aperture of the maniflod was blanked off with a disk of light tank plate, brazed in place at the flange where the exhaust pipe would have been attached for normal set-up.



Tapping manifold at center and blanking off former end outlet give direct outlet for this exhaust through roof.

5. INSTRUMENTS

Shield Safeguards Thermometer Setting

Formed from square can with one side cut away, this device protects unit from sun and wind without hindering use.

WHERE a dry-bulb thermometer is to be used in an exposed location, its reading may be greatly altered, if not rendered absolutely useless, if the sun strikes directly on the unit.

Such a thermometer may be protected against sun and possible accidental contact if a long square can be taken and one side cut almost entirely away. This shield, suspended with wires or clamps from any convenient overhead support, completely encloses the thermometer on three sides, but because of the one open side, does not hold the instrument in a dead-air pocket.

The lower end of the thermometer may be supported by means of heavy cord laced through holes punched in the lower ends of opposite sides of the shield, and any swinging or possible vibration breakage thus forestalled.

Anywhere!

Buckeye Trenchers minimize right-of-way work. Dig in any soil. Ruggedly constructed. Faster. Readily maneuvered. Model 12 (shown) for gathering, gasoline and small natural gas lines. Models 32 or 48 for main lines. The standard trenchers for pipeline work.

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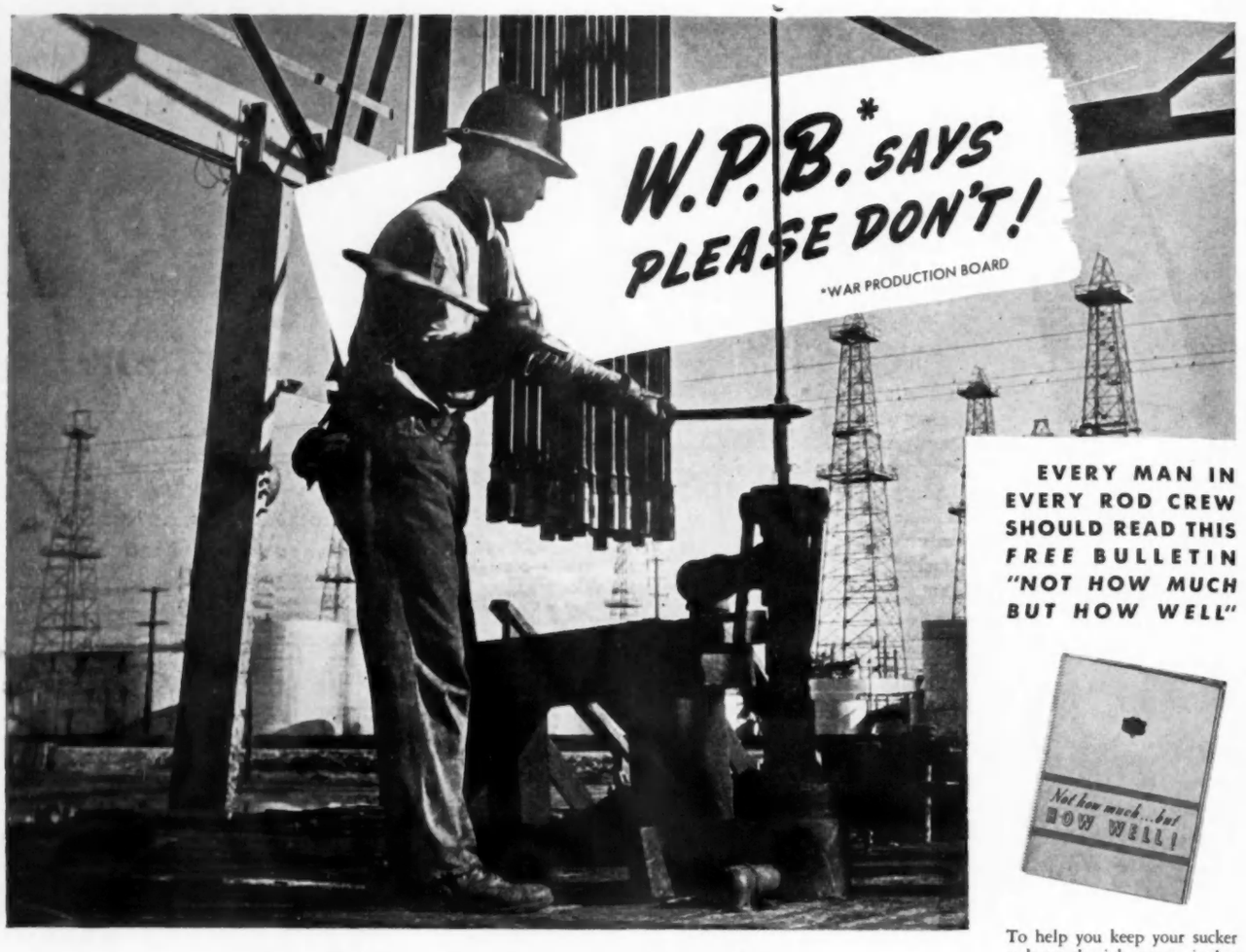

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Tires, automobiles and gasoline aren't the only things rationed today. Rod stock is likewise on "the hard-to-get list," in fact in some cases, impossible to obtain. Such a condition is regrettable, but unavoidable. Even our oldest customers will experience delay on delivery. That is why we earnestly request your cooperation in the handling and servicing of Axelson rod strings you now have in operation. Proper care of sucker rods will prolong their service life. It is vital not only to the oil industry that material be conserved, but it is just as essential to every other industry which uses steel. Make your sucker rods last for the duration. It will pay you dividends.

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The Week's News

Eastern Committee Starts Campaign Against Oil Use

An extensive campaign to acquaint domestic users of fuel oils on the Eastern seaboard with necessity for and means of conserving oil supplies was outlined last week by John A. Brown, chairman of District 1 Industry Committee and president of Socony-Vacuum Oil Company. The drive will supplement Petroleum Coordinator Harold L. Ickes' letters to fuel oil suppliers, various organizations and state and city officials requesting these to impress consumers with the urgent nature of the situation.

The campaign is expected to enlist the aid of fuel-oil suppliers, jobbers and peddlers supplying home owners in District 1. All marketers in the district have been asked by the marketing committee to obtain the cooperation of jobbers and peddlers in publicizing the campaign directed at domestic consumers of fuel oils. These consumers are being asked to conserve fuels by changing over to coal where possible, improving oil burning installations to increase heating efficiency, insulating buildings, and avoiding maintenance of needlessly high temperatures in dwellings.

The district marketing committee has urged petroleum marketers to obtain from the committee copies of campaign material to be mailed consumers by the marketers directly or by their jobbers and peddlers. It is intended that all consumers obtaining oil from these sources receive a series of letters containing facts on the need of oil conservation and methods of reducing consumption during summer and winter. The last of three letters is scheduled to be mailed September 15, the beginning of the heating season. The use of company magazinies and radio is recommended to the companies having such facilities as means of augmenting the direct-mail campaign.

Safety Congress Changes Chicago Meeting Dates

Date and location of the 31st National Safety Congress and Exposition have been changed because the government has taken over for military purposes the Stevens and Congress Hotels in Chicago, where the congress originally was to have been held.

The 1942 congress will be held October 27, 28, 29. It will be housed in three big Chicago hotels—the Sherman, the La Salle and the Morrision. Convention headquarters will be in the Sherman.

These changes will in no way affect the size, scope and importance of the congress. There will be 200 sessions, with 500 program participants, it was said.

Texas Commission Seeks To Conserve Gas

The Texas Railroad Commission last week held several hearings involving the conservation of gas. The commission is attempting to reduce the amount of gas used for lifting oil wherever it is possible.

In East Texas, it has closed down wells owned by L. W. Callender, because these wells use in excess of 10,000 cubic feet of gas in getting oil from a lease on the west edge of the field. Callender had asked for a permanent order, but this request was denied. Last week he asked for a 90-day permit apparently hoping that by that time some plan could be worked out whereby the gas, after it was stripped, could be diverted to some useful purpose.

Operators in the North Ward field, Ward County, asked the commission to close in wells producing with high gas/oil ratios, and distribute the allowables now assigned to these wells to other wells on the same leases. A similar request was made by Sun Oil Company for the Sun field, Starr County.

Senators Plan Hearings On Public Oil Lands

A series of hearings on the development of the oil resources of the public lands will be held in the West this month by a special Senate committee headed by Senator O'Mahoney of Wyoming.

The committee was set up to determine how private oil operators can be encouraged to develop new fields on the public domain, its membership including Senators Gurney of South Dakota, Murdock of Utah and Thomas of Idaho.

O'Mahoney announced that the first hearing would be held at Casper, August 19, the committee then moving to Artesia, New Mexico, for a hearing August 25 and to Midland, Texas, for a hearing August 28.

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Pipeline Proration Will Be Before Texas Hearing

The Texas Railroad Commission will have before it the problem of pipeline proration at its next statewide hearing to be held Monday, August 17. At a hearing August 7, the commission asked operators whether they wished to have their fields cut back where pipeline proration was being applied. The operators in the Aransas Pass field were the only ones who asked for a cut.

Some fields in West Texas, Southwest Texas, and the Gulf Coast are now able to sell only half, or less, of the oil assigned by proration schedules. The revised order of the commission issued August 8, did not change these figures.

It is possible that the operators hope that market conditions will improve, and for that reason they wish to retain the allowables which they hold now, even though the oil cannot be sold.

The commission on August 8 revised its allowables to provide additional oil for war purposes. Most of the increases granted were in compliance with requests made by Humble Oil & Refining Company, and the Office of the Petroleum Coordinator.

The adjustment was made by directly increasing the allowables assigned to the wells in some fields, and by reducing the number of shutdown days in others.

Although the operators at hearings had reported numerous fields where pipeline proration was in effect, the commission did not reduce the allowables for these fields, but increased other fields an estimated total of 94,000 barrels daily.

The allowables for the following fields were increased but no change in the shutdown days was made. They will be allowed to produce 22 days in August. Tom O'Conner raised from 22,829 to 51,536; Henderson raised from 4200 to 6341; Talco raised from 24,854 to 31,500; Thompsons raised from 12,024 to 20,064.

The following fields were raised by allowing them to produce without shutdown after August 7: Greta Deep, Heyser, Mellon Creek, Refugio Fox, Conroe, Raccoon Bend, Raccon Bend Cockfield, Cotton Lake, South Cotton Lake, Hastings, Turtle Bay, Magnet Withers, Thompson South, Manvel Oligocene, Plymouth, Rincon, Eastland County, Erath County, Loving, Yates, KMA - Ellenberger, Hults - Owens, Joy Mississippi, and Antelope.

The following fields were exempt from shutdowns except August 8, 9, 15 and 16: Lolita, West Ranch, Lovell's Lake, Amelia, Sugarland, Clear Lake, Webster, Conoco Driscoll, Wade City, Orange Grove, Walnut Bend, and Bonita.

A statement by Commission Chairman Ernest O. Thompson said:

"The Texas Railroad Commission today amended its oil proration order for the remainder of the month of August by increasing certain field allowables where the crudes produced in those fields were needed to run to full capacity refineries making war products, such

as aviation gasoline and toluene and lubrication oils and waxes.

"The plants turning out these products have been assured of transportation priorities and the commission is determined to see to it that no defense or war industry shall be short of crude petroleum of any type produced in Texas.

"Whenever any demand for Texas oil is shown to be a real demand on proof after hearing, we promptly allow the oil to be produced from all those fields producing the type of crude desired.

"The commission has called the regular statewide oil hearing on August 17 for the purpose of fixing the allowable production for Texas oil fields for the month of September. All purchasers are required to promptly file nominations for the exact amount of crude they will need for each and every day during September. At the statewide hearing on the 17th, we will fully consider the question of pipeline proration in West Texas.

"Several companies have just recently resumed full takings of the allowable production in West Texas so we are waiting until the 17th to see what adjustment may be necessary in that area.

"In the past nominations were in excess of actual needs but in recent months the purchasers are nominating only what they actually need and the commission has just about eliminated duplications in nominations because all nominations are carefully checked and sifted from any possible duplications.

"It is apparent that Texas is going to have to supply an ever increasing percentage of the nation's oil needs.

"We have 55 percent of the nation's oil reserves and are presently supplving less than 40 percent of the production. Since states like Oklahoma and Illinois and Kansas and California do not seem able to produce the oil they have heretofore been producing, Texas is going to have to produce more oil.

"Last week the above states withdrew from storage one million barrels of crude to meet their demands. This cannot go on long. The result will be that purchasers will seek the oil from Texas.

"There should be a balance between reserves and production. Texas has 55 percent of reserves and should accordingly produce 55 percent of the national demand."

Colombia Uses Up U. S. Import Quota

Colombia last month joined Mexico in using its full quota of oil to be shipped to the United States for entry at reduced excise-tax rates under the Venezuelan reciprocal trade agreement, it was announced by the Treasury August 12.

During July, the department reported, Colombia shipped in some 2,200,000 gallons of crude, topped crude and fuel oil to fill its 1942 quota of 94,662,490 gallons. Mexico filled its quota of 150,-868.343 gallons in May.

Receipts from Venezuela during the month approximated 3.200,000 gallons to make a total of 317,366,111 gallons out of a quota for the year of 2,082,574.771 gallons, and the Netherlands shipped in slightly less than 15,000,000 gallons to make its seven-month total 251,714,859 gallons out of a quota of 630,097,196 gallons, it was shown.

Canada Building Plant For Synthetic Rubber

Canada is to being synthetic rubber production next year, C. D. Howe, Canadian Minister of Munitions, disclosed last week. Polymer Corporation, a government-owned enterprise in charge of the Canadian rubber program, has begun construction of a $40,-000,000 plant which is scheduled to begin producing 40,000 tons per year of rubber in 1943. Petroleum will be the main raw material, although some rubber will be made from grain alcohol.

The program is the outcome of studies made by Dr. H. B. Speakman, head of the Ontario Research Foundation, who recently toured American synthetic rubber laboratories, and whose studies led the Canadian government to plan its rubber program on the basis of both petroleum and grain as raw materials. Howe declared he doubted that Canada would ever return to large-scale use of natural rubber.

Mexican Monopoly Denies Its Position Is Dangerous

Denial that the Mexican oil industry is in a dangerous condition because of the war was issued in Mexico City last week by Petroleos Mexicanos, the government oil monopoly. The denial was an answer to statements by two Mexico City newspapers that the industry is in the worst condition that has developed since the expropriation move in 1938. It was alleged that sales of Mexican oil in the United States were being made at a loss.

Petroleos Mexicanos admitted that tanker transportation costs have greatly increased, but said the monopoly "has not really suffered losses as a result of the condition, for this institution adopted measures to restrict and in some cases to totally suspend shipments, making limited movements by virtue of direct arrangements with the buyers to obtain price benefits that compensate for transportation costs." Admission was made that from the start of the second quarter this year, oil exports have been "considerably reduced," causing a drop in income but not to a dangerous extent.

Petroleos Mexicanos said it hoped to alleviate transportation difficulties by arranging with the American War Shipping Board for the lease of tankers.

Colombian Nationalization Plan Would Aid Drilling

Nationalization of privately-owned oil lands in Colombia is the object of a bill which Minister of Petroleum N. Pineda has introduced into the Colombian congress, where the bill is at present before an oil committee of the lower house.

Basing his bill on a section of the national constitution which declares "the state may intervene through laws in the exploitation of industries, or through private or public enterprises, for the purpose of rationalizing production, distribution and consumption of natural resources," Pineda proposes to eliminate the practice of leasing oil lands from private individuals, thus giving the government sole control of lands sought by the oil companies. The measure provides that a land owner would be paid a percentage of the royalty to be paid the government by an oil company which contracts for the land. The percentage the owner would receive, which is based on oil production, would vary in accordance with distance of the land from an export terminal.

It is pointed out that the bill, if passed, would have the effect of sweeping away obstacles which the present oil laws present to drilling on private lands. Chief among these is that a company must present proof that the solicited lands came into private ownership prior to October 1873 before the government will permit drilling. It is extremely difficult to establish such proof, with the result that practically no drilling of private lands has occurred. Estimates place private lands at about 40 percent of the total prospective oil territory of Colombia. An objection that has been raised against the bill is its interference with private property rights, since land owners would have no choice but to accept royalty payments on government terms.

One feature of the bill should be of considerable value to oil companies at present in difficulty about carrying out drilling obligations under current national concession contracts, this feature being that the Ministry of Petroleum would be allowed to suspend those obligations for two years. Trouble in obtaining drilling equipment would thereby be recognized.

Shell Unit Starts Test In Magdalena Valley Area

Compania de Petroleos La Estrella de Colombia, a Shell affiliate, has spudded a test in the as yet unproductive northern Magdalena River valley. The well, El Dificil 1, is on a 120,000-acre concession 190 miles north of Barranca Bermeja, which is the center of the present wildcat program in the valley, and about 40 miles east of the river.

On a tract adjoining this concession and southeast of it, Shell Oil Company of Colombia was drilling below 9000 feet in El Doce 1.

Colombian Petroleum Company has production in its second test of the Socuavo area on the Barco concession. Socuavo 2, drilled to 5575 feet, is reported flowing in a 24-hour test at the rate of about 450 barrels per day with a low gas/oil ratio. The well is 4 miles north of the No. 1 producer which was completed early this spring as the deepest Barco well, having been drilled to 9850 feet.

Richmond Petroleum Company is reported as having abandoned its second test, Braval 2, on the Camacho Roldan concession, after drilling to 3544 feet without shows in the Cretaceous. The rig is scheduled to be moved southward to the company's Villamizar concession, where a second test will be drilled. The first well was abandoned last December.

N.P.A. Annual Meeting Moved to Pittsburgh

Because all suitable hotels at Atlantic City have been taken over by the Army Air Corps, it has been decided to hold the annual meeting of the National Petroleum Association at the William Penn Hotel, Pittsburgh, on September 17 and 18.

A program closely related to the war effort is being arranged and will be announced in the near future.

This will be the association's 40th annual meeting and will be in every respect worthy of the fine traditions of the association, an announcement said.

Stocks of Heating Oils Encouragingly Increased

Statistics of the oil industry for the week ended August 8 were the most encouraging that have been published in recent weeks. They revealed that the industry had noteworthy success in building up stocks of heating oil which will be urgently needed within a few months. The addition of the light-fuel oils for the week amounted to approximately 1½ million barrels, which was materially better than the accumulation in the corresponding week of last year. The nation's stocks of gas oil and distillate fuels were increased to 39,024,000 barrels as of August 8, and that quantity was within 11.0 percent of the 43,996,000 barrels on hand August 9 of last year. At the beginning of the week there had been indicated 13.0 percent less of the light fuels in storage than the year before.

This accelerated build-up of light fuel oil stocks apparently reflected the measures being employed to increase shipments into the East Coast as well as larger yields of those oils at the refineries. The industry still faces a serious problem in connection with heating oils, and plans for rationing them on the East Coast continue under consideration.

There was also some success in increasing stocks of residual fuel oil. The total quantity of those heavy oils on hand August 8 was 78,575,000 barrels, an increase of 192,000 barrels within the week. As in the case of light-fuel oils, however, inventories of the heavy fuels are seriously deficient and larger additions than those heretofore achieved would be highly desirable. The present stocks are 14,614,000 barrels (15.6 percent) lower than the total of 93,189,000 reported for August 9 last year.

These favorable results in connection with both light- and heavy-fuel oils were achieved without unfavorable effect on gasoline inventories. United States stocks of gasoline were practically unchanged during the first week of August. They totaled 81,315,000 barrels on August 8, having been reduced only by the nominal amount of 9000 barrels during the week. Normally, at this time of the year gasoline is taken out of storage in comparatively large volume.

The stocks of gasoline are being adjusted fairly well in line with the curtailed demand for that product this year. Currently, the industry has on hand nearly 3 million barrels (3.2 percent) less than at this time last year. The 81,315,000 barrels reported as of August 8, 1942, compared with 84,073,000 barrels August 9, 1941.

Crude oil runs to stills were lower in the week of August 8 than in the previous week by 111,000 barrels daily, having averaged 3,561,000 barrels per day. At that rate, the plants of the nation were utilizing 74.2 percent of their rated capacity. They were operating at a rate 9 percent lower than in the corresponding week of last year, a decrease about in line with the curtailment of demand now as compared with a year ago.

Crude-oil production shot up close to 4 million barrels daily, as higher allowables went into effect. The actual output was fairly close to the production rate recommended for August by the petroleum coordinator.

Although statistics no longer are broken down by districts for the East Coast and the supplying districts of the Southwest, the figures for the week of August 8 did show for those areas combined there was an addition of nearly a million barrels to the stocks of light fuel oils, an addition of 268,000 barrels of heavy fuel oils and a build-up of 213,000 barrels in gasoline stocks. In the same districts there was a reduction of 33,000 barrels in daily average crude runs to refinery stills. Runs averaged 1,627,000 barrels daily, or 66.7 percent of capacity.

The Appalachian District made small withdrawals from stocks of both light and heavy fuel oils, but added 259,000 barrels of gasoline to storage, while charging to stills 10,000 barrels daily less than in the previous week. Appalachian runs averaged 142,000 barrels daily, or 81 percent of capacity.

The Middle West added about 400,000 barrels to light-fuel oil stocks and about 225,000 barrels to stocks of heavy-fuel oil, but withdrew 158,000 barrels of gasoline. In that district (Indiana-Illinois-Kentucky), runs to stills averaged 715,000 barrels daily (89 percent of capacity), down 27,000 barrels from the previous week.

Similar results occurred in the upper Mid-Continent. Oklahoma, Kansas and

Petroleum Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels)

STATE OR DISTRICT	[1]OPC Allocation in August	PRODUCTION IN WEEK ENDED Aug. 8	Aug. 15
Arkansas	81,600	72,450	72,500
California	767,200	709,900	731,500
Long Beach		35,500	36,000
Midway-Sunset		58,100	58,300
Kettleman Hills		37,300	39,800
Wilmington		97,200	96,400
Rest of State		481,800	501,000
Colorado	7,200	6,200	6,350
Illinois	289,300	282,150	255,250
Salem		41,050	39,450
Louden		47,700	45,000
Other New Pools		180,900	159,800
Old Pools		12,500	11,000
Indiana	20,600	18,250	19,000
Kansas	281,900	256,250	290,750
Kentucky	14,100	13,150	16,850
Louisiana	332,600	330,850	333,100
North Louisiana		96,000	97,050
South Louisiana		234,850	236,050
Michigan	66,800	62,450	62,450
Mississippi	50,000	76,400	78,900
Missouri		130	130
Montana	22,700	22,900	22,000
Nebraska	4,100	3,550	3,500
New Mexico	97,300	82,150	84,950
New York	15,300	14,700	12,300
Ohio	10,500	9,200	13,250
Oklahoma	415,500	388,975	376,750
Oklahoma City		76,450	65,900
Seminole Area		96,950	94,500
Rest of State		215,575	216,350
Pennsylvania	52,800	55,450	50,100
Tennessee		30	30
Texas	[2]1,396,700	1,485,550	1,384,450
Upper Gulf Coast		301,300	291,450
East Texas Field		420,450	361,400
Rest of Eastern Texas		91,750	95,050
Lower Gulf Coast		103,400	108,700
Southwest Texas		62,950	54,750
South Central Texas		17,950	18,700
West Texas		248,000	221,500
North Texas		139,350	139,000
Panhandle		100,400	94,900
Utah		15	15
West Virginia	17,300	10,050	9,150
Wyoming	95,900	94,200	94,000
Total United States	4,038,500	3,994,950	3,917,275

[1] Production rates recommended for states by Office of Petroleum Coordinator, on basis of Bureau of Mines forecast of the nation's daily average requirements for domestic crude during month. State conservation authorities except Texas Railroad Commission have prescribed allowables calculated to hold actual production within OPC regulations. (Details on state allowables published in The Oil Weekly of August 3, page 43.)

[2] Texas fields will be shut down on August 8, 9, 15, 16, 22, 23, 29, 30 and 31.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

ITEM	Crude Oil Prod. Bbls. Day (Add 000)	Week Ended	Runs to Stills Bbls. Day (Add 000)	Week Ended	Crude Stocks Bbls. (Add 000)	Week Ended	Gasoline Stocks Bbls. (Add 000)	Week Ended	Gas Oil & Distillate Stocks Bbls. (Add 000)	Week Ended	Residual Fuel Oil Stocks Bbls. (Add 000)	Week Ended
Highs:												
1939	3,910	8- 5	3,650	10-21	278,607	5-26	87,769	4-22	39,562	10-28	116,237	8-26
1940	3,890	3-16	3,690	6-22	265,865	8-31	102,817	4-20	49,051	10-19	109,135	9-14
1941	4,337	11-22	[1]4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	[1]4,337	2- 7	3,961	1- 3	263,208	3-28	[2]107,229	3-14	49,357	1- 3	95,857	1- 3
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[3]229,127	10-21	71,152	10- 7	20,722	4-15	105,397	4- 8
1940	3,335	11-30	3,370	1- 6	237,339	1-27	79,847	11- 9	23,551	4- 6	102,344	2-10
1941	3,364	1-11	3,490	1-18	240,399	11-15	80,870	10- 4	28,381	4-12	90,914	7-12
1942	3,297	7- 4	3,393	5-23	244,364	1-10	81,315	8- 8	29,240	4-25	76,903	7- 4
Trends in 1942 (Week Ended):												
Jan. 3	4,038	.....	3,961	.....	244,440	.....	92,987	.....	49,357	.....	95,857	.....
Jan. 31	3,871	.....	3,848	.....	250,740	.....	97,810	.....	40,674	.....	91,189	.....
Feb. 28	4,016	.....	3,675	.....	259,373	.....	105,635	.....	34,547	.....	88,285	.....
Mar. 28	3,820	.....	3,667	.....	263,208	.....	105,624	.....	31,756	.....	83,045	.....
April 25	3,581	.....	3,506	.....	257,073	.....	102,897	.....	29,240	.....	81,107	.....
May 30	3,877	.....	3,522	.....	255,023	.....	95,355	.....	31,384	.....	79,628	.....
June 27	3,719	.....	3,581	.....	253,364	.....	88,396	.....	32,851	.....	77,304	.....
July 4	3,297	.....	3,551	.....	253,280	.....	87,014	.....	33,520	.....	76,903	.....
July 11	3,657	.....	3,582	.....	251,311	.....	85,658	.....	34,418	.....	77,891	.....
July 18	3,713	.....	3,582	.....	250,505	.....	84,069	.....	35,176	.....	77,230	.....
July 25	3,691	.....	3,658	.....	249,262	.....	82,281	.....	35,966	.....	77,816	.....
August 1	3,383	.....	3,672	.....	248,336	.....	81,324	.....	37,530	.....	78,383	.....
August 8, 1942	3,970	.....	3,561	.....	.....	.....	81,315	.....	39,024	.....	78,575	.....
August 9, 1941	3,912	.....	3,912	.....	[4]252,535	.....	84,073	.....	43,996	.....	93,189	.....
Change:												
In week	+587	.....	—111	.....	—926	.....	—9	.....	+1,494	.....	+192	.....
In year	+58	.....	—351	.....	—4,199	.....	—2,758	.....	—4,972	.....	—14,614	.....
In year	+1.4%	.....	—8.9%	.....	—1.6%	.....	—3.2%	.....	—11.3%	.....	—15.6%	.....

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent States. [4] Stocks, August 2, 1941.

Missouri added 127,000 barrels of light fuel oil and 33,000 barrels of residual fuel oil, but took out 360,000 barrels of gasoline. Runs to stills averaged 366,000 barrels daily, or 88 percent of capacity, up 1000 barrels from the previous week.

The Rocky Mountain States showed small additions to stocks of both light and heavy fuel oil and a 40,000-barrel reduction of gasoline stocks, while runs to stills averaged 89,000 barrels per day, or 61 percent of capacity, being but 3000 barrels a day less than in the previous week.

California continued to encounter difficulty in supplying heavy-fuel oil and took from storage 315,000 barrels. However, light-fuel oil stocks were increased 55,000 barrels, and stocks of gasoline were expanded 77,000 barrels. These results were achieved with runs to stills averaging 622,000 barrels daily (76 percent of capacity). The runs were down 39,000 barrels from the previous week.

Stanolind Taking Oil From Eureka Field

Stanolind Pipe Line Company made initial crude runs August 12 through its 7-mile 4-inch extension line from Fairbanks station to the Eureka field, adjacent to Houston, where it will handle 1500 barrels of oil daily along with other Gulf Coast crudes for delivery to affiliated refineries in the Middlewest. Stanolind acquired the 5-mile gathering system installed in the Eureka area from Crown Central Petroleum Corporation, which has been moving the oil by tank cars to its refinery on the opposite side of Houston. The latter relinquished the connections in order to comply with rule prohibiting use of tank cars for less than 100-mile haul.

Transport and Oil Men To Meet at Houston

John L. Rogers, director of Division of Motor Transport, Office of Emergency Management, Washington, has announced that a meeting for all Texas refiners, marketers and jobbers will be held in Houston, August 20. Principal speakers will be R. S. Williams and Herman Groth of Office of Defense Transportation, Washington.

Claud B. Barrett, territorial sales manager, The Texas Company, announced sessions will begin 10 a.m. at the Rice Hotel. The theme of the meeting will be "America's Trucks—Keep Them Rolling."

Ward County Outlet

Shell Pipe Line Corporation has completed a 2-mile combination 2- and 3-in crude line from Shell Oil Company's recent deep discovery on Sealy-Smith ranch, northeastern Ward County, in connecting with its West Texas system.

Natural Gasoline Line Work Progressing

Phillips Petroleum Company has completed 75 miles of its projected 240-mile 8-inch natural gasoline pipe line system that will enable gasoline plants in West Texas to make deliveries direct to the company's refining units at Borger, Texas. A 55-mile 6-inch lateral is to be built to plants in Lea County, New Mexico.

Illinois Production Gained in July

Bringing the total Illinois oil production for the first seven months of this year to 66,420,000 barrels, oil wells in the state produced 8,506,000 barrels during July, an increase of 77,000 barrels over the preceding month, the monthly drilling report of the state geological survey division showed today.

The total production in the state during the first seven months of last year was 71,808,000 barrels.

Of 223 wells completed in Illinois fields during July, 119 were producers. Of these, 11 were successful wildcats opening up new pools or extending producing fields.

The state department of mines and minerals issued 338 drilling permits during the month, of which 130 were for wildcat drilling, 187 for pool development wells, 19 for secondary recovery projects and two for salt-water-disposal wells.

Engineers to Conduct Tests September 18-19

The Texas State Board of Registration for Professional Engineers will hold examinations in Austin, Texas, on September 18 and 19 for applicants for registration under subsection B of section 12. Carl L. Svensen, secretary, is passing out information.

Atlantic Gets Injunction Against Texas Valuations

Atlantic Pipe Line Company has been granted a temporary injunction by a Travis County District Court, in its attack on the Texas state tax board findings on intangible values for 1942.

The company is contesting the value fixed by the board, and has obtained a temporary restraining order preventing the board from certifying these values to the various county tax officials. So far, no other company has contested the rates fixed.

Booklet Commemorates Texas Company Birthday

As part of the celebration of its fortieth anniversary, The Texas Company has issued a 24-page booklet describing the progress the company has made since it was "born" 40 years ago at Beaumont.

The booklet is unusual in that it devotes six pages to informal, chatty descriptions of outstanding national and international events during the year 1902. Under the heading, "What Went On," the author says "to the historian the year 1902 was not particularly eventful. There were no great occurrences—nothing that would seem to alter the course of nations or affect the future of mankind. Most official records merely cite a great anthracite coal strike and a destructive eruption of Mount Pelee on Martinique Island. Yet 1902, the year of the founding of The Texas Company, was a year of promise. It would appear that Uncle Sam, after the boom days of the late nineties, was hitching up his galluses and getting ready for his next forward step—a period of great industrial and merchandising expansion."

Following a recitation of events, the booklet tells a brief story of the company's growth, how J. S. Cullinan came to Texas from Pennsylvania to sell tanks, and how he afterward met J. S. Hogg and J. W. Swayne, and how they closed a deal in April, 1902, incorporating The Texas Company to take over all properties and obligations of Texas Fuel Company. The company has been a steadfast pillar in the American oil industry ever since.

California Demand Up During First Six Months

In the first half of 1942 demand for all petroleum products in the Pacific Coast territory increased 33,000 barrels daily over the like 1941 period, data compiled by the United States Bureau of Mines indicates. Daily average demand for the six months to the end of June stood at 735,000 barrels, contrasted with 702,000 barrels daily for the first half of last year.

In June demand for all products in the territory averaged 844,000 barrels daily, contrasted with 741,000 barrels daily in the same month last year, an increase of 103,000 barrels daily. When compared with May this year the June demand figure represented an increase of 88,000 barrels daily.

To meet the unprecidented demand for June, 145,000 barrels daily was withdrawn from inventories, as compared wtih storage withdrawals during May of 81,000 barrels daily. June crude production was 25,000 barrels daily higher than in the previous month.

Demand for fuel oil increased to the highest level of record at 394,000 barrels daily during June, which compares with 278,000 barrels daily in the like month last year and 352,000 barrels daily in May. Average fuel-oil demand for the six months to June 30, 1942, stood at 342,000 barrels daily, whereas in the like 1941 period the average was 281,000 barrels daily.

Gasoline requirements in the territory have averaged higher than anticipated for the full six months to June 30, 1942, running to 225,000 barrels daily, or only slightly behind the 231,000 barrels daily average obtaining in the like period last year. June gasoline demand was 248,000 barrels daily, compared with 234,000 in May and 254,000 in the same month last year.

1942 Transactions, A. I. M. E.

The 1942 volume of "Petroleum Development and Technology," published by the Petroleum Division, A. I. M. E., covers and puts in permanent form most of the papers presented at the New York, Dallas and Los Angeles meetings of the division, and includes the usual statistical summary of developments in the oil-producing areas of the world—outside of Axis domination. In addition to the papers reproduced in full, with discussions, the volume lists other papers read before various sections of the Institute and thus forms a bibliography of such material.

Production engineering, engineering research, petroleum economics and production statistics form the four principal divisions of the volume, 20 technical papers being used in the first three of these divisions, with discussions appended to more than half of that number.

U. S. Field Operations

Illinois Basin

Dale South Outpost Makes 646-Barrel Flow

South outpost to Dale field, Hamilton County, completed. Clay County wildcat testing, showing oil and some water. South outpost to new Jeff pool flowing 66 barrels an hour. Activity still increasing in new St. Jacob area on west side of basin in Madison County.

Hamilton County: Texas Co.'s Hall B-4, NW NE SE 18-6s-7e, south outpost to the Dale field, flowed 646 bbls in 24 hrs natural from Aux Vases at 3005-36 ft; total depth 3036 ft in saturated sand.

Clay County: Big Chief Drilling Co.'s Barbree 1, SW SW SE 35-5n-6e, 4 miles north of Louisville, a wildcat, is swabbing after fluid rose 1000 ft in hole with show of water when plug was drilled.

Wayne County: Deep Rock Oil Co.'s Craig 1, C NE SW 30-1s-7e, south outpost to new Jeff pool, flowed 1880 bbls initially from McClosky at 3222-35 ft, natural.

Shell's Rutger 1, E½ NE NE 17-1n-7e, 2 miles northwest of the Cisne field, was waiting on cement after second squeeze job; after perforations in McClosky at 3184-94 ft and a 500-gallon acid treatment, it swabbed 160 barrels of salt water.

Shell's Montgomery 1, NW SW 14-1s-6e, 2 miles north of the Sims field, swabbed 54 bbls of oil, 5 bbls of water in 6 hrs after 10-quart shot in Aux Vases at 3063-70 ft

Madison County: Sohio Producing Co.'s Meyer 1, SW NW SW 15-3n-6w, in new St. Jacob pool, pumped 501 bbls from Trenton lime.

Obering & Bryant's Buchman 1, SW NW SE 27-3n-6w, 2 miles from the field, was waiting on cement after squeeze job on Trenton lime at 2302-57 ft; swabbed 14 bbls of oil in 12 hrs and was acidized with 5000 gallons after which it began flowing oil and water; operators believe water is coming from behind the casing.

Monthly Summary: Operations were at a higher level in July than at any time this year with 223 completions of which 119 were producers. Eleven pools were opened or extended. Total wells in new Illinois fields now are 11,110 of which 610 have been completed in 1942. Production for July was 8,506,000 as against 8,429,000 in June. There were 338 permits issued in July of which 130 were for wildcats.

Indiana

Ohio Oil Co.'s C. H. Walters 1, NW SE 3-8n-10w, Sullivan County, flowed 485 bbls of oil in 24 hrs after 5000 gallons of acid in Devonian lime at 2387-2407 ft. Four drilling operations are under way and 7 locations on the strength of the Devonian showing have been made.

Kentucky

Cherry & Kidd's Burbank 1, 2½ miles northwest of Smith Mills, Henderson County, swabbed 7 bbls of oil an hr from McClosky at 2674-83 ft and was showing no water. The test is 10 miles from other production. In addition to McClosky pay, it has saturation in Cypress sand at 2300-23 ft.

Results on Industry's Prospecting Fronts

Texas Gulf Coast: Production tests due in two deep wildcats.

South Louisiana: New drilling scheduled at Pine Prairie.

East Texas: Chapel Hill extension two miles south indicated.

Southwest Texas: Shell extends production one mile in Sheridan pool, Colorado County.

Illinois: Dale south outpost makes good well.

Kansas: Drilling continues to increase—321 operations active.

Michigan: Fifteen wildcats among starts during week.

ILLINOIS FIELD COMPLETIONS

Clinton County—Texas Co.'s Murphy 3, sw nw ne 2-2n-2w, Bethel 1195-1220 ft, 140 bbls, 1220 ft.

Texas Co.'s Grey Comm. 4, ne sw se 35-3n-2w, Bethel 1195-1217 ft, 85 bbls, 1224 ft.

Edwards County—Sinclair Wyoming's Bierhaus 1, c n ½ nw sw 6-1n-14w, Cypress sand 2848-56 ft, 23 bbls, 3216 ft.

Magnolia's Gould 1, 90 ft s of c sl nw ne 7-1s-11e, McCl 3239-44 ft, 3247-57 ft, 60 bbls, 3351 ft.

Cities Service's Thread C-1, nw sw 18-1s-11e, McCl 3182-87 ft, 175 bbls, 3202 ft.

Fayette County—Carter's Doty 2-5, sw c nw 2-8n-3e, Weiler 1483-1501 ft, Pt Crk 1571-77 ft, gas input, 1648 ft.

Carter's Musser 3-D, se nw sw sw 2-8n-3e, Dev 3116-18 ft, 192 bbls, 3118 ft.

Franklin County—Ike W. Taylor's Old Ben Coal Co. 13, se sw ne 19-5s-2e, abnd 2741 ft.

E. S. Adkins' Montgomery Q-1, se sw nw 20-5s-2e, abnd 2926 ft.

Hamilton County—Texas Co.'s Hunt 1, ne sw nw sw 7-6s-6e, L. O'Hara 3172-86 ft, AV 3086-3129 ft, 412 bbls, 3300 ft.

Carter's Mayberry 1, nw sw sw 12-6s-6e, AV 3046-56 and 3060-68 ft, 170 bbls, 3068 ft.

Shell's Beagle 7, 18 ft n of nw sw sw 5-6s-7e, AV 2986-3018 ft, 1507 bbls, 3027 ft.

Jasper County—Baldwin et al's Sunderland et al 1, c w½ se sw 6-5n-14w, McCl 2853-62, 2864-68 and 2868-73 ft, 135 bbls, 2873 ft.

Lawrence County — Ray Phebus et al's Crews 3, se nw ne ne 19-4n-10w, Buchanan 1075-95 and 1168-1172 ft, 1,031 gas, 1172 ft.

Rayn Oil Co.'s Schafer 1, ne ne sw 27-2n-12w, Bethel 2010-14 and 2023-26 ft, 80 bbls, 2030 ft.

Richland County—Pure's Veit Cons. 1, c nw nw 26-4n-9e, Weiler 2588-2610 ft, 18 bbls, 2624 ft.

Texas Co.'s Hasslinger 1, 170 ft e of sw se nw 22-4n-10e, abnd 3146 ft.

St. Clair County—Soil Oil Test Co.'s Reichert 1, sw se nw 3-1s-10w, abnd 814 ft.

Wabash County—Magnolia's Earnest 1, se ne nw 34-2n-12w, abnd 2320 ft.

Trans-Tex Prod. Co.'s Mussett 1-A, se sw se 19-2s-13w, Biehl 1702-13 ft, 3 bbls, 1713 ft.

Trans-Tex Prod. Co.'s Mussett 2-C, ne sw nw 29-2s-13w, Cyp 2451-64 ft, 125 bbls, 2471 ft.

Wayne County—Texas Co.'s Dickey 1, c w½ sw se 20-1s-6e, McCl 3170-76 and 3178-87 ft, 160 bbls, 3195 ft.

Ben J. Taylor's Simms 1, nw se 24-1s-6e, abnd 3262 ft.

N. V. Duncan's Withrow-Pittman 1, nw ne 29-1s-6e, McCl 3151-60 and 3172-75 ft, 59 bbls, 3187 ft.

Texas Co.'s Buchal 2, c w½ nw se 33-1s-6e, L. O'H 3143-49 ft, McCl 3192-96 and 3196-3214 ft, 140 bbls, 3220 ft.

Texas Co.'s Buchal 3, c w½ se ne 33-1s-6e, McCl 3164-72 and 3174-80 ft, 300 bbls, 3211 ft.

Gulf's Blackburn-Thomas 1, ne ne 30-1s-7e, McCl 3242-52 ft, 178 bbls, 3263 ft.

White County—Longhorn Oil Corp.'s Helm 37, se se nw 22-3s-14w, McCl 2907-13 ft, 50 bbls, 2920 ft.

W. C. McBride's Grey 4, nw nw ne 31-3s-8e, McCl 3317-19 ft, 54 bbls, 3319 ft.

Sun's Ford B-3, sw se ne 21-4s-14w, pay 2851-67 ft, 45 bbls, 2869 ft.

Sun's Ford B-4, sw ne ne 21-4s-14w, AV 2824-60 ft, 85 bbls, 2860 ft.

Kingwood & Sinclair-Wyo.'s Hale B-1, sw sw nw 1-7s-8e, McCl 2997-3002 ft, 3032-37 ft, 203 bbls, 3146 ft.

Carter's Daily 1, c ne nw 15-7s-8e, Walts 2211-20 ft, 49 bbls, 2220 ft.

Carter's McCormick 1, c nw nw 15-7s-8e, Walts 2238-42 ft, 42 bbls, 2243 ft.

Carter's Hill 1, c se se 16-7s-8e, Walts 2188-93 ft, 53 bbls, 2197 ft.

U. S. Drilling Operations in Week Ended August 15, 1942

STATE	ALL WELLS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	†Miscel.	Total 1942	Total this Date 1941	‡WILDCATS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	Distillate	Total 1942
Alabama						3	1						3
Arizona	2			2		2							
Arkansas						79	105						8
California	13	7		6		448	719	6			6		40
Colorado						8	10						
Georgia						2	1						2
Illinois	52	31	1	18	2	1,217	2,294	16	4		12		348
Indiana	9	4		5		251	326	2			2		59
Iowa							5						
Kansas	38	21		14	3	1,016	1,396	8			8		230
Kentucky	2			1	1	90	191	1			1		21
Louisiana	8	4		4		629	883	1	1				94
Michigan	14	4	3	7		431	502	6			6		106
Mississippi						69	113						17
Missouri						16	41						
Montana						110	118						
Nebraska						26	53						12
New Mexico	12	6	1	5		260	227	5			5		27
New York	27	15			12	761	553						1
Ohio	18	7	7	4		686	1,022						
Oklahoma	35	13	1	6	15	931	1,345	14	2		12		193
Pennsylvania	42	39	2	1		2,289	2,531						
Tennessee						7	14						
Texas	87	58	1	23	5	3,758	6,333	16	4		12		730
Utah							1						
Virginia						1							
West Virginia	13	2	8	2	1	465	408						
Wyoming						51	73						3
Total this week	372	211	24	98	39	13,606	19,265	75	11		64		1,894
Total last week	365	212	33	102	18	13,234	18,556	64	5	1	58		1,819
Total this year	13,606	7,244	1,124	3,523	1,715			1,894	263	30	1,596	5	

† Includes old wells deepened, water intake, gas input, salt water disposal, and distillate wells.
‡ OPC program calls for 4,000 wildcats in 1942, of which 624 should produce oil and 116 gas, leaving 3,260 dry.

ILLINOIS OLD WELLS DEEPENED

Hamilton County—Cameron Oil's Sharp 1, c sw ne 4-6s-6e, otd 3141 ft, abnd 3301 ft.

ILLINOIS WILDCAT COMPLETIONS

Bond County: Failure—Bond County Gas Co.'s Faires 1, ne se se sw 20-6n-3w, abnd 765 ft.

Clay County: Failure—National Pet.'s Co.'s Veronica-Iffert Comm. 1, nw sw se 3-4n-8e, abnd 3129 ft.

Clinton County: Failure—Texas Co.'s Conrad 1, ne se sw 8-2n-1w, abnd 1715 ft.

Coles County: Failure—E. C. Baker et al's Cox 1, se ne se 3-13n-7e, abnd 1856 ft.

Hamilton County: New Field—Ohio's Moore 1, ne se nw 35-6s-5e, AV 3296-3309 ft, 146 bbls, 3315 ft.

Jefferson County: Failure—E. E. Gill's Threlkeld 1, c ne sw 13-4s-2e, abnd 2905 ft.

Lawrence County: New Field—W. R. White et al's Collison 1, ne se nw 26-2n-12w, Biehl sand 1363-88 ft, 125 bbls, 1388 ft.

Morgan County: Failure—G. L. Hills et al's Sharp 1, ne ne se sw 25-13n-10w, abnd 952 ft.

Perry County: Failure—W. C. McBride's Miller 1, ne nw sw 30-5s-1w, abnd, 1620 ft.

Pulaski County: Failure—R. G. Williams et al's Richey 1, ne se sw 9-15s-1e, abnd 3885 ft.

Saline County: Failure—Buell & Herndon's Wilson 1, ne se nw 9-8s-5e, abnd 3200 ft.

Wayne County: New Field—Pure's Pike 1, nw nw 13-1s-7e, AV 3065-81 ft, 237 bbls, 3212 ft.

Wayne County: New Field—H. H. Weinert's Crews 1, c s½ se se 28-1s-8e, McCl 3252-66 and 3276-83 ft, 20 bbls, 3380 ft.

Wayne County: Failure—H. H. Weinert's Sutherland 1, c s½ sw ne 4-2s-8e, abnd 3324 ft.

White County: Failure—Cherry & Kidd's Smith 1, sw ne sw 15-4s-14w, abnd 3080 ft.

Carter's Davis 1, c nw sw 4-7s-8e, abnd 3155 ft.

ILLINOIS WILDCAT STARTS

Clay County—Big Chief Drlg. Co. et al's Barbel 1, sw sw se 35-5n-6e, dr.

Clinton County—E. J. Ruwaldt's Twiss 1, ne sw ne 23-2n-5w, dr.

Smokey Oil Co.'s Hord 1, nw sw se 11-3n-2w, dr.

Cole County—F. D. Walker et al's Walker et al 1, ne ne se 35-14n-7e, dr.

Edwards County—Sinclair-Wyo.'s Perkins 1, nw se se 8-3s-10e, lcn.

Fayette County—Troop & Larson's Larimore 2, se ne ne 25-9n-3e, dr.

Franklin County—W. C. McBride's Mower 1, se se sw 14-5s-1e, lcn.

E. S. Adkins' Van Honefeke 1, se se se 6-5s-2e, dr.

Gallatin County—Sohio Prod. Co.'s Crawford et al's 1, ne sw sw 12-8s-10e, lcn.

Madison County—F. H. Burdette's Frey 1, sw sw sw 22-3n-6w, dr.

Marion County—Braniger & Powers' Hatfield 1, c sw se 28-1n-2e, dr.

Morgan County—Walter Vette's Zachary 1, c nw ne 21-15n-9w, dr.

St. Clair County—L. L. Benoist's Tiedeman 1, se sw nw 8-2n-7w, dr.

T. R. Kerwin's Harbough 1, nw ne sw 28-2n-8w, dr.

Wabash County—McGibbons Oil Co.'s Stillwell 1, c sw se 7-1n-11w, lcn.

Williamson County—Tioga Oil Co.'s H. Biehl Comm. 1, nw nw nw 8-8s-3e, dr.

INDIANA FIELD COMPLETIONS

Gibson County—John Dee, Tr.'s Wyatt 1, Don 81-1n-10w, abnd 1889 ft.

R. D. Brown's Lehman 2, sw se nw 36-1s-10w, Hards 1347-69 ft, 40 bbls, 1390 ft.

Pike County—Scales & Dawson's Roy 1, se ne sw 16-3s-7w, abnd 1171 ft.

Posey County—McBride's Swonder 13, nw ne 4-4s-14w, AV 2806-24 ft, 241 bbls, 2826 ft.

John Lindas et al's Seifert 3, 60 ft e cel se nw nw 30-6s-12w, Mans 1080-1113 ft, 50 bbls, 1113 ft.

Spencer County—C. G. Farrelly's Protsman 4, 86 ft s of c sw se 1-6s-4w, abnd 850 ft.

Sullivan County—Ohio's Walters 1, c nw se 3-8n-10w, Dev 2386-2401 ft, 385 bbls, 2407 ft.

INDIANA WILDCAT COMPLETIONS

Knox County: Failure—Sinclair-Wyo. et al's Kuhn 1, nw ne ne 2-1n-9w, abnd 1650 ft.

Pike County: Failure—Stroble & Bury's Blaize 1, 110 ft s of c s½ ne nw 12-1s-9w, otd 1480 ft, abnd 1685 ft.

INDIANA WILDCAT STARTS

Marshall County—John E. Short's Schroeder 1, nw nw nw 6-34n-1e, lcn.

Perry County—United Oil Co.'s Polk 1, se c nw se 7-7s-2w, lcn.

Posey County—John W. Carter's Alldredge 1, c se nw 22-6s-14w, lcn.

Clark C. Nye's Black 1, c ne se 3-7s-14w, lcn.

Starke County—John E. Short's Uncapher et al 1, ne ne ne 1-34n-1e, lcn.

Vanderburg County—Geo. E. Nelson's Zimmerman 1, se c nw se 22-7s-11w, lcn.

KENTUCKY WELL DEEPENED

Webster County—Iley Browning's Walker 2, 22-N-24, otd 1183 ft, McCl 1487-98 ft, 40 bbls, 1498 ft.

KENTUCKY WILDCAT COMPLETIONS

Grayson County—Louisville Gas & Electric Co.'s Nugent 1, 11-K-38, abnd 1894 ft.

Oklahoma

Carter County Well Center of Interest

Overshadowing other developments this year is Pure Oil Co.'s discovery of new Simpson-Ordovician pool at Fraser 1, SW NE SW 26-3s-1e, Caddo-Springer area, north of Ardmore in Carter County. Showing first when gas blew out at 5420 ft, and a retest showed rich sand at 5412 to 5428 ft. Drill-stem test showed 15 bbls hourly, and when plug was drilled out and tested 8 hours it made 100 bbls of oil and 35 bbls of salt water hourly. When water increased and oil decreased to 90 and 44 hourly in 9 hours, the well was shut in to study formation and equipment.

Pipeline is being laid to Pure's Noble 1, C NE SE 35-3s-1e, which went to 8501 ft in 1939, and testing water, plugging back to 4454 ft and completed for 100 bbls in a sandy accumulation in Woodford shale. The line will permit a full testing of new discovery, hailed by Oklahoma oil men as paving the way for heavy development south of Arbuckles.

OKLAHOMA FIELD COMPLETIONS

Bryan County: Cumberland—Pure's Thompson (205) 2, se se sw 21-5s-7e, McLish 5263 ft, McLish sand 5673 ft, 2264 bbls, 5786 ft.

Creek County: Glenn—Gulf's Berryhill 37, nw se ne 17-17n-12e, pay 1472-1573 ft, shot 30 qts, pump 22 bbls oil, 6 wtr, 1578 ft.

Creek County: Sapulpa—Abe Pepis' Land 2A, c nw ne 16-18n-11e, Glenn 1791 ft, pb 1800 ft, shot 80 qts, 30 qts, pump 7 bbls, 1960 ft.

Garfield County: N. Lucien — Magnolia's Montgomery 1, nw se nw 36-21n-3w, Wilcox (2nd) 5551 ft, abnd 5562 ft.

Garvin County: Pauls Valley—Ohio-Sun's Teter-Adams 1, se sw sw 30-4n-1e, Bromide 4058 ft, flow 2160 bbls, 4087 ft.

Pure's Cashian-Teter 1, se sw ne 31-4n-1e, Penn sand 4045 ft, pb 4115 ft, flow 262 bbls, 4336 ft.

Pure's Teter 8, se ne nw 31-4n-1e, Penn sand 3834 ft, pb 3980 ft, flow 254 bbls, 4130 ft.

Kay County: Dilworth—C. A. Leonard's Larrabee 1, ne se se 24-28n-1w, Wilcox 3308 ft, pump 25 bbls, 3432 ft.

Logan County: Crescent—Continental's Ferguson 2, sw nw se 27-17n-4w, Layton 4903 ft, flow 240 bbls, 2½ in, 4949 ft.

Logan County: Lovell—Fain-Porter et al's Cain 1, ne nw sw 8-18n-4w, 2nd Wilcox 6431 ft, abnd 6441 ft.

Noble County: Otoe—Superior's Faubiam 1B, c w½ nw se 16-22n-1e, salt water disposal, 1035 ft.

Osage County: Wildhorse—Peters Pet. 2, sw sw sw 11-22n-10e, Arb 2121 ft, hfw 2138-41 ft, abnd 2141 ft.

Osage County: Avant—Cortez Oil Co.'s 1, se se ne 3-23n-11e, Miss 1747 ft, abnd 1794 ft.

Osage County: Unnamed—Johnson Oil & Refg.'s 1, c nw ne 32-25s-6e, Woodford 2932 ft, hfw 2958 ft, abnd 2991 ft.

Pawnee County: Cleveland—Sinclair Prairie's Jones 41, sw se nw nw 20-21n-8e, sand 216 ft, .135 gas, 260 ft.

Payne County: Yale—Kingery Prod. Co.'s Stopps 1, c se se 34-19n-6e, Wilcox 3452 ft, abnd 3460 ft.

Pottawatomie County: N. St. Louis—Viersen's Duncan 2, ne sw se 21-8n-4e, Hunton 3905 ft, 3000 gals acid, flow 360 bbls, ¼ in, 3937 ft.

Crosbie & Atlantic's Trice 1, sw ne 23-9n-4e, Hunton 4266 ft, perf 4261-68 ft, 5000 gals acid, pump 43 bbls oil, 18 water, 4285 ft.

Tulsa County: Turkey — T. J. Helscell's Cline 6, ne se sw ne 1-18n-12e, Burgess 1477 ft, shot 44 qts 1477-93 ft, pump 6 bbls, 1493 ft.

OLKAHOMA OLD WELLS DEEPENED

Carter County: Hewitt—J. S. Batson's Williams 3, 110 ft w of ne sw ne 20-4s-2w, otd 2025 ft, junked 2695 ft.

Creek County: Glenn — Sinclair Prairie's Berryhill 19, nw sw nw ne 16-17n-12e, otd 1491 ft, Glenn 1426-1538 ft, shot 35 qts 1500-35 ft, pump 2 bbls, 1538 ft.

OKLAHOMA WILDCAT COMPLETIONS

Hughes County: Failure—Phillips' Smith 1, nw se sw 31-7n-11e, Brn. Lm. 2458 ft, Cameron 2650 ft, Warner 2775 ft, Atoka 3045 ft, Atoka sand 3124 ft, Wapa 4162 ft, Union Valley 4445 ft, Crom 4478 ft, abnd 4672 ft.

Jackson County: Failure — W. J. Moran's Dought y1, sw sw sw 18-3n-20w, Wichita Albany 1052 ft, Pontotoc 1325 ft, Granite wash 1852-2360 ft, Canyon lm 2750 ft, brn sd 3014-90 ft, Arb lm 3105 ft, abnd 3284 ft.

Jefferson County: Failure—Norville et al's Snyder 1, c ne nw 3-5s-9w, abnd 2425 ft.

Kay County: New Field—Skelly and Selby's Gilmore 1, nw ne nw 19-27n-1w, Arb 3574 ft, 1st Simp sd 3567 ft, cored 3532-48 ft, odor gas, 3000 gals acid, 12 bbls oil 6 to 25 bbls water, 3612 ft.

Lincoln County: Failures—D. B. Malernee's Trawick 1, se se sw 25-16s-5e, Hogs 2190 ft, Lay 2250 ft, Clevel 2562 ft, Osw 3204 ft, Miss 3870 ft, Wood 4060 ft, Hunton 4090 ft, Syl 4110 ft, Viola 4175 ft, Dense 4210 ft, Dolo 4220 ft, 1st Wx 4226-40 ft, 2nd Wx 4259-83 ft, Viola 4190-4203 ft, perf 20 holes 4190-4208 ft, water, abnd 4283 ft.

Stanolind-Amerada's Crawford 1, ne ne se 35-15n-2e, 2nd Wx 5218 ft, Tyner 5395 ft, Arb 5680 ft, abnd 5887 ft.

Logan County: Failure—Fain-Porter et al's Cain 1, ne nw sw 8-18n-4w, Oread 3665 ft, Tonk ls 4050 ft, Avant 4345 ft, U Lay 4775-90 ft, M Lay 4878 - 4903 ft, big lime 5427 ft, Cherokee 5570 ft, Miss 5719 ft, Wood 6069 ft, Viola 6180 ft, Dense 6225 ft, 1st Wx 6332 ft, abnd 6437 ft.

Noble County: Failure — Magnolia-Wilcox's Janke 1, se se ne 10-21n-2e, Neva 580 ft, Foraker 660 ft, Paw 1340 ft, Avant 2600 ft, Layton 3022 ft, Osw 3630 ft, B'ville 3950 ft, Miss 4208 ft, Viola 4428 ft, 1st Wx 4485 ft, 2nd Wx 4515-32 ft, abnd.

Okfuskee County: Failure — Phillips and British American's Hollingsworth 1, sw sw nw 13-21n-9e, Osw 1478 ft, Calc 1508 ft, Inola 2455 ft, B'ville 2530 ft, brn ls 2715 ft, Booch 2865 ft, Gilc 3035 ft, Wood 3680 ft, Hunton 3705 ft, Idy Ec4884 ft, 2nd Wx 3899 ft, abnd 3925ft.

Osage County: Failure—Johnson Oil & Ref.'s Osage Tribe 1, c nw ne 32-25n-6e, Avant 1452 ft, Dewey 1503 ft, Hogs 1829 ft, Ceb 2008 ft, big lime 2290 ft, Osw 2453 ft, Burbank 2782 ft, hole full water, abnd 2887 ft.

Pawnee County: Failure—J. W. Perry's Oakleaf 1, ne se sw 19-22n-6e, Avant 1750 ft, Dewey 1833 ft, Hogs 2105 ft, Ceb 2430 ft, big lm 2535 ft, Osw 2620 ft, Prue 2800 ft, Skinner 2918 ft, Miss 3128 ft, Wood 3320 ft, Wx 3374-79 ft, abnd 3443 ft.

Payne County: New Field—T. E. Berry's Fee 1, ne se se 12-19n-4e, big lm 3070-3195 ft, Miss 3667 ft, Wood 3758 ft, Mise 3798 ft, Syl 3802 ft, Viola 3813 ft, 175 bbls oil and 1 bbl wtr, 3813 ft.

Seminole County: Failures—Burns' Rogers 1, c nw ne 19-8n-7e, Senora 2425 ft, brown lm 3125 ft, Booch 3325 ft, Gilc 3257 ft, Crom 3279 ft, Mayes 3770 ft, Wood 3870 ft, Hunt 3986 ft, Syl 4005 ft, Viola 4070 ft, Dense 4120 ft, Dolo 4145 ft, Wx 4179 ft, 2nd Wx 4268 ft, abnd 4276 ft.

Wood Oil Co.'s Ligon 1, ne nw se 30-8n-6e, Belle city 880 ft, Calvin 2650 ft, Senora ls 2870 ft, Ucon sd 3540 ft, Miss Caney 3560 ft, Mayes 4000 ft, Wood 4070 ft, Hunt none, Syl 4226 ft, Viola 4285 ft, Dolo 4370 ft, Wx 4385-90 ft, sand 4405 ft, abnd 4525 ft

OKLAHOMA WILDCAT STARTS

Cleveland County—Monarch Royalty Co.'s Schultz 1, c ne ne 5-10n-1w, lcn.

Creek County—A. J. Peters' Lumm 1-B, ne sw se 8-14n-8e, dr.

Jefferson County—H. F. Gibson's Hefner 1, c sw se ne 30-3s-4w, cellar.

Marshall County—H. F. Potts' Godfrey 1, ne ne sw 13-6s-6e, pb.

Oklahoma County—Sunray's Armstrong 1, sw se nw 6-13n-1e, lcn.

Osage County—Ohio's Osage 2, 32-22n-9e, dr.

Payne County—Berry & Co.'s Hat 1, se nw nw 9-19n-3e, dr.

Pottawatomie County—H. L. Berkey's Reynolds 1, c sw sw 4-11n-6e, lcn.

Kansas

Drilling Continues Increase; Peace Creek Interesting

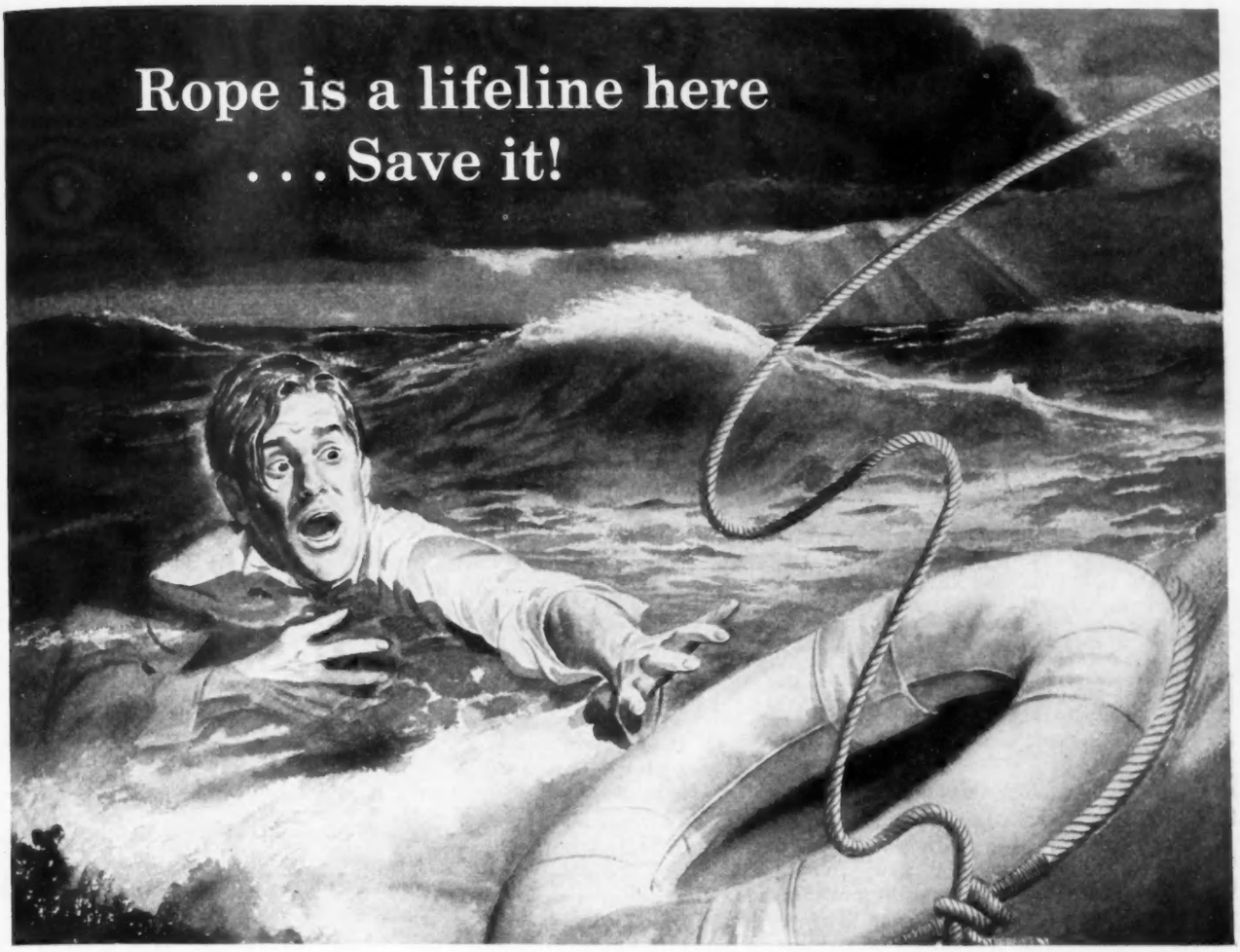
While drilling keeps increasing in Kansas, totaling 321 operations during the past week, no unusual developments are reported. Chief interest centers in the Greater Peace Creek field of Reno County, where good Viola lime wells are being found. Sinclair Prairie Oil Co.'s Crandall 1, C NW SE 14-23-10w, extended the play to the southeast when it found pay to test 5435 bbls on bottom-hole-pressure bomb for state rating of 3000 barrels.

Cities Service Oil Co. continues to test English 1, wildcat NEc 8-25-16w, south of Eberle, Edwards County, showing for producer at 4650 ft. Last gauge was for 28 bbls of oil and some water.

KANSAS FIELD COMPLETIONS

Barton County: Kraft-Prusa—Black-Marshall's Hoffman 1, ne se sw 19-16s-11w, Gorham sand 3362 ft, pump 278 bbls, 3373 ft.

Barton County: Feltes—R. E. Day's Thies-



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sen & Hoffman 1, c n½ ne nw 14-16s-12w, Arb 3352 ft, abnd hfw 3385 ft.

Barton County: Trapp—T. C. Johnson, Est.'s Bitter 12, c sw sw 8-16s-13w, Basal sand 3540 ft, salt water disposal,' 3555 ft.

Barton County: Stickney—Skelly's Susank 3, se sw ne 19-16s-13w, Arb 3400 ft, 500 gals acid, pump 320 bbls oil, 114 wtr, 3425 ft.

Continental's Redetzke 3, se se sw 20-16s-13w, Arb 3384 ft, 2000 gals acid, pump 571 bbls, 3389 ft.

Barton County: Kraft - Prusa — Skelly's Grosshardt 4, ne se ne 15-17s-11w, Arb 3296 ft, 3000 gals acid, 2000 bbls, 3333 ft.

Stanolind's Soeken 5, ne se nw 22-17s-11w, Arb 3279 ft, 3000 bbls, 3285 ft.

Barton County: S. Silica—Lario's Temmen 1, c n½ sw nw 36-20s-11w, Arb 3344 ft, abnd 3390 ft.

Butler County: Potwin—Bennett & Abel's Maxwell 2, ne se ne nw 31-24s-4e, Miss chat 2656 ft, pump 50 bbls oil, 25 wtr, 2675 ft.

Butler County: North Augusta—Ash & Plymate et al's Brown A-1, ne se se 16-27s-4e, Wilcox 2479 ft, 101 ft of 5-in perf liner on bottom, pump 25 bbls oil, 30 wtr, 2558 ft.

Ellis County: Bemis—Champlin's Gladhardt 5, c e½ nw ne 29-11s-17w, Arb 3595 ft, 3000 gals acid, pump 120 bbls, 3621 ft.

Ellsworth County: Unnamed—Derby's Colberg 1, c n½ nw sw 33-17s-9w, Arb 3241 ft, abnd 3261 ft.

Kearney County: Patterson — Stanolind's Beissel 1, c e½ nw nw 25-22s-38w, Patterson sand 4740 ft, pump 266 bbls, 4752 ft.

Leavenworth County: McLouth—Magnolia's Kesinger 1, c se nw 1-10s-20e, Miss lime 1467 ft, show gas 1406 ft, show oil 1390 ft, abnd 1470 ft.

McPherson County: Henne—H. & M. Oil Co.'s Toll 1, c s½ nw nw 21-17s-1w, Miss 2643 ft, 2000 gals acid, 1075 bbls, 2656 ft.

Pratt County: Iuka—Atlantic's Tritsch 1, c nw se 11-27s-13w, Simpson 4294 ft, 1500 gals acid, pump 831 bbls, pb 4313 ft, td 4314 ft.

Reno County: Schweizer—Mid-Continent's Smisor 2, sw sw sw 30-22s-9w, Viola 3670 ft, 500 gals acid, pump 239 bbls, 3699 ft.

Reno County: Hendrickson—Sinclair Prairie's Baughman 1, sw nw ne 1-23s-10w, Viola 3706 ft, 120 bbls, 3732 ft.

Transwestern's Withroeder 2, sw se nw 1-23s-10w, Viola 3700 ft, 3000 bbls, 3712 ft.

Rice County: Keesling—Auto Ordnance's Hall 2, c n½ se sw 34-19s-9w, Arb 3230 ft, abnd 3276 ft.

Rice County: Smyres—Transwestern's Braden 2, ne se nw 1-20s-6w, Miss lime 3345 ft, pump 73 bbls, 3372 ft.

Rice County: Keesling — Cities Service's Dick B-1, c nw sw 9-20s-9w, Arb 3229 ft, 1000 gals acid, pump 544 bbls, 3235 ft.

Rice County: Raymond—Anderson-Prichard's Yeo A-2, c n½ nw nw 29-20s-10w, Arb 3298 ft, abnd 3304 ft.

Russell County: Gorham—Texas Co.'s Anschutz 7, c se sw 1-14s-15w, Reagan sand, 1041 bbls, 3287 ft.

Russell County: Fairport—C. E. Liggett et al's Cook 1, c sw nw 9-11s-15w, Congl 3424 ft, 96 bbls, 3427 ft.

Russell County: Trapp—Champlin's Tittle "B," c n½ sw sw 14-15s-14w, Arb 3355 ft, 1500 gals acid, 15 bbls, 3360 ft.

Russell County: Trapp—Phillips' Kramer 1, c nw sw 14-15s-14w, Arb 3343 ft, 300 gals acid, 1070 bbls, 3345 ft.

Phil-Han's Karst 2, c nw se 22-15s-14w, Arb 3323 ft, 1000 gals acid, 1434 bbls, 3325 ft.

KANSAS OLD WELLS DEEPENED

Russell County: Davidson—H. H. Blair's Foster 1, c s½ se se 33-15s-11w, otd 3008 ft, granite wash 3243 ft, abnd 3285 ft.

Sedgwick County: Greenwich — Aylward's Erdwin 2, ne sw sw 11-26s-2e, otd 3172 ft, Arb 3307 ft, pay 3300-10 ft, shot 20 qts, pump 23 bbls oil, 192 wtr, 3313 ft.

KANSAS WILDCAT COMPLETIONS

Barton County: Failure—Nadel & Gussman's Russell 1, ne ne ne 29-18s-14w, Anhy 915 ft, Lansing 3272 ft, Congl 3550 ft, Arb 3576 ft, abnd 3607 ft.

Cowley County: Failure—Margay Oil Co.'s Wilson 1, se se sw 3-32s-3e, Kansas City 2530 ft, Miss 3093 ft, Arb 3385-90 ft, abnd 3398 ft.

Ellis County: Failure — Darby Pet. Co.'s Kansas Experimental Station 1, nw ne nw 4-14s-18w, Anhy 1170 ft, Howard 2964 ft, Topeka 3044 ft, Lansing 3276 ft, Congl 3533 ft, Arb 3601-37 ft, abnd.

Pawnee County: Failure—Herndon Drlg's Singer 1, sw sw se 1-23s-15w, Anhy 930-80 ft, Lansing 3586 ft, Base KC 3844 ft, Congl 3956 ft, Simpson 4000 ft, Arb 4061 ft, abnd 4095 ft.

Phillips County: Failure—Sinclair Prairie's Johnson 1, ne ne nw 33-1s-19w, Anhy 1849 ft, Lansing 3420 ft, stain 3420-23 ft, Base KC 3695 ft, Arb 3810 ft, Pre-Cambrian 4092 ft, granite 4097-4102 ft, 2000 gals, abnd.

Rice County: Failure—Auto Ordnance Corp.'s Ward 1, sw sw sw 33-20s-9w, Lansing 2928 ft, Base Kansas City 3225 ft, Congl 3232 ft, Simp 3304 ft, Arb 3314 ft, abnd 3341 ft.

Rooks County: Failure—Broadview Oil Co.'s

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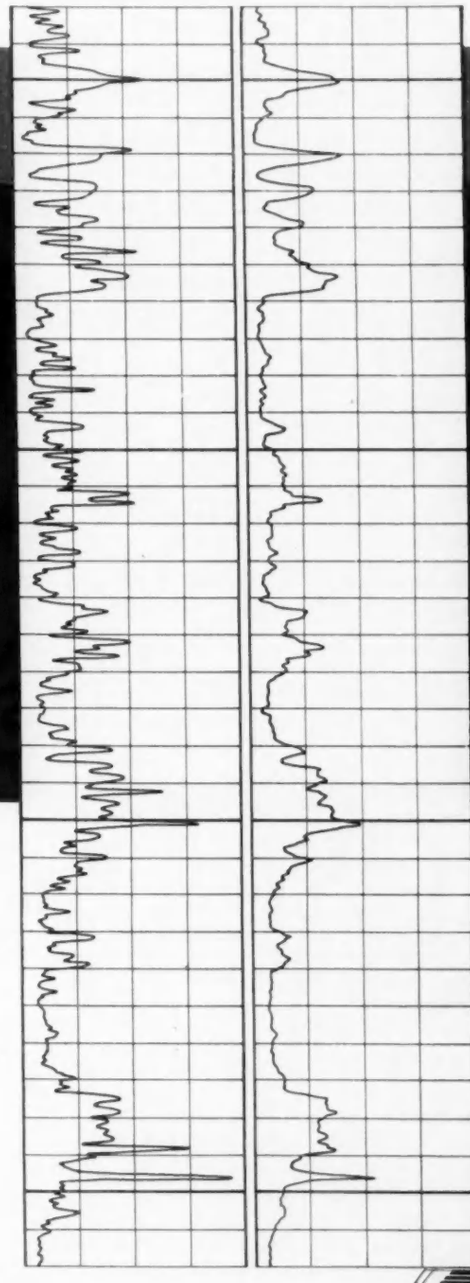

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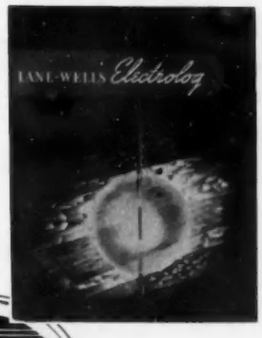

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Stafford County: Failure — Cities Service's Liberty Life 1, se se nw 1-23s-14w, Anhy 800 ft, Ft. Riley 1980 ft, Topeka 3025 ft, Lansing 3469 ft, Viola 3790 ft, Simpson 3823 ft, Arb 3883 ft, abnd 3913 ft.

KANSAS WILDCAT STARTS

Barber County—Great Lakes Carbon's Werner 1, cse se 20-30s-14w, Anhy 750 ft, Ft. Riley 2300 ft, dr.

Edwards County—Fain Drlg.'s Roenbaugh 1, se nw nw 22-26s-17w, sd.

Greenwood County — K. T. Weidemann's Stewart 1, c ne se 12-27s-8e, cellar.

Hodgeman County—Fain Drlg's Baldrey 1, sw sw se 4-23s-22w, sd.

Pratt County—Hannum Drlg. et al's Taylor 1, nw nw ne 19-26s-13w, rig.

Sedgwick County—H. M. William et al's Gsell 1, ne ne se 33-26s-2e, rig.

NEW MEXICO FIELD COMPLETIONS

Eddy County—Barney Cockburn et al's State 3, c ne nw 2-17s-30e, flow 583 bbls, 2-in, shot 144 qts 2902-74 ft, td 3060 ft.

Barney Cockburn et al's Etz 7, c ne ne 35-16s-30e, flow 150 bbls, 2-in, shot 110 qts 3050-3105 ft.

Nay Hightower et al's Grier 5, c sw ne 31-16s-31e, flow 175 bbls, 2-in, natural, 3125-30 ft, td 3238 ft.

Sanders Bros.' Evans 5, c ne sw 33-16s-30e, flow 102 bbls, 2-in, shot 180 qts 2854-2929 ft.

Lea County: Maljamar—Johnny Cockburn et al's Miller 3-B, c sw nw 25-17s-32e, flow 480 bbls, 2-in, shot 200 qts 4088-4190 ft.

Johnny Cockburn et al's Pearsall 2-A, c sw sw 33-17s-32e, pump 12 bbls, shot 150 qts 4190-4250 and 80 qts 3570-3600 ft, td 4872 ft, pb to 4250 ft.

San Juan County—Southern Union Prod. Co. s Ute 1, 613 ft from n and 1078 ft from w 21-32n-14w, 7,000,000 sweet gas, td 2499 ft, pb to 2489 ft.

NEW MEXICO WILDCAT COMPLETIONS

Eddy County: Failure—E. Orcutt et al's State-Newman 1, c se sw 16-21s-26e, elev 3254 ft, abnd, sul water 1125-27 ft, td 1250 ft.

Lea County: Failure — Mascho Oil Co.-American Drilling Corp.'s State-Tidal 1, c sw nw 18-12s-35e, elev 4135 ft, anhydrite 2110 ft, Yates 2870 ft, 1st lime stringer 3928 ft, San Andres 4205 ft, abnd 5175 ft.

McKinley County: Failure—Guarantee Oil Co.'s Fee 1, ne ne ne 31-20n-9w, abnd 570 ft.

San Juan County: Failures—Golden Rule Oil Co.'s Westbrook 1, se se se 15-31n-13w, abnd 502 ft.

Goodrum & Vincent's Rinehardt 2, ne ne ne 21-29n-11w, abnd 870 ft.

NEW MEXICO WILDCAT START

Roosevelt County—W. J. Peterman et al's State 1, c sw se 21-2s-30e, near Elida, lcn 4400-ft test.

ARIZONA WILDCAT COMPLETIONS

Maricopa County: Failure—Samuel F. Reaves et al's King 1, 33-1n-4w, abnd 1780 ft.

Yuma County: Failure — Yuma O&G Co.'s Valley Fill 1, sw nw ne 11-11s-25e, elev 135 ft, abnd 4882 ft.

West Texas

Gaines County Wildcat Has Show in Stray Sand

Gaines County wildcat plugged back to test stray show oil after yielding water in Clear Fork. Wildcat failures in four counties. Crane County prospect drilling above Ellenburger on revised formation call.

Gaines County: The Texas Co.'s Robertson 1, 2½ miles northwest of inactive Permian producer in Kirk area, logged favorable lime conditions and porosity in Clear Fork section, but tested water at 7541-7621 ft. Increase in water noted in drilling to 7686 ft, then plugged back to 6490 ft to retest porous zone at 6457 ft that previously yielded trace of oil with little water and drilling fluid.

Andrews County: Atlantic - Wiggins and Hyde's University-Texu 1-A, projected Ellenburger wildcat, drilling dry lime 9095 ft, with top of Simpson tentatively called at 8085 ft, elevation 3311 ft. Phillips Petroleum Co.'s University-Andrews 3, ⅜ mile southwest of its Embar deep discovery, required more swabbing than previous two completions to attain natural flow of 154 bbls of oil 15 hours from dolomite 7870-7901 ft in Ellenburger, topped at 7740 ft, 15 ft high. Portion of pay excluded in setting pipe 130 ft in Ellenburger, as compared to 55-ft exclusion by other wells.

Crockett County: Grapeland Oil Co.'s Couch-Humble 1, 2½ miles west of Clara Couch pool, Crockett County, abandoned in water 2407 ft, making the sixth failure within and near production since the pool was opened August, 1941. Completions are listed for Howard, Martin and Pecos counties.

Crane County: Magnolia's Glenn 1, situated on a general strike between the Abell and Sand Hills fields, was drilling dry dolomite 5790 ft, possibly in Simpson. Top of Ellenburger originally called at 5258 ft proved erroneous. In northwestern Crane County, The Texas Co.'s T. P. Land Trust 1 drilling lime 5405 ft, having tested sulphur water at 4758-62 ft in solid lime, topped 4615 ft.

WEST TEXAS FIELD COMPLETIONS

Andrews County: Embar Deep — Phillips' University-Andrews 4, c se nw sec 30, blk 10, elev 3259 ft, Simpson 7686 ft, Ellenburger 7745 ft, flow 1848 bbls 44.7-gr, 2-in and ½-in natural, 7803-60 ft.

Andrews County: Fullerton — Magnolia's Ralph 2, c nw se PSL 11, blk A-37, flow 138 bbls, ½-in, gas/oil ratio 800/1, acid 14,000 gals Clear Fork 6845-7280 ft.

Cochran County: Slaughter — Continental's Dean 5, 1950 ft from s and 669 ft from e lse, Martin CSL, leag 58, flow 723 bbls, 2-in, acid 12,000 gals 4957-5001 ft.

Honolulu's Dean 9, 2363 ft from n and 560 ft from w lines lse, leag 58, Martin CSL, flow 937 bbls, 2½-in, acid 10,000 gals 4925-5010 ft.

Honolulu's Dean 10, 560 ft from w and 3465 ft from s lines lse, leag 58, flow 920 bbls, 2½-in, acid 10,000 gals 4935-5015 ft.

Honolulu's Dean 11, 2310 ft from s and 560 ft from w lines lse, leag 58, flow 779 bbls, 2½-in, acid 10,000 gals 4940-5020 ft.

Magnolia's Mallet 14-C, 580 ft out nec lab 6, leag 51, Scurry CSL, flow 1173 bbls cas, acid 10,500 gals 5018-63 ft.

Crockett County: World-Powell—M. & M. Prod. Co.'s Powell 4-B, 2200 ft out nwc GC&SF 62, blk BB, pump 191 bbls, acid 1000 gals 2637-46 ft.

Ector County: North Cowden—Stanolind's Midland Farms 4-D, 86 ft w and 556 ft n of swc T&P 44, blk 42, but in sec 100, flow 995 bbls, 2-in, shot 490 qts 4595-4796 ft, td 4836 ft.

Gaines County: Seminole—Mabee O&G Co.'s Riley-Humble 1, 660 ft out swc n-100-ac sw WT 190, blk G, flow 238 bbls, ½-in, 5155-5255 ft.

Hockley County: Slaughter—Honolulu's Frazier 20, 3105 ft from e and 1920 ft from n lines PSL 10, blk X, flow 1402 bbls, 2½-in, acid 10,000 gals 4890-4990 ft.

Honolulu's Frazier 22, 2306 ft out nwc PSL 10, blk X, flow 1498 bbls, 2½-in, acid 10,000 gals 4920-5010 ft.

Honolulu's Slaughter 39-B, 665 ft out nwc lab 49, leag 37, Zavalla CSL, flow 931 bbls, 2½-in, acid 10,000 gals 4920-5005 ft.

Pecos County: Abell—Stanolind's Wagner 1-B, center lot 15, H&GN 23, blk 9, flow 99 bbls, ¼-in, washed 125 gals Waddell, perf 5751-66 ft, td 5780 ft.

Pecos County: Fromme—Cordova Union Oil Corp.'s Fee-State 1, 98 ft se and 330 ft ne of swc lse, Pink Phelps sur, abnd hfw 1685-1702 ft.

Terry County: Slaughter—DeKalb Agricultural Assn.'s Alexander 3, 3194 ft from n and 554 ft from e lines s½ PSL 7, blk X, pump 204 bbls, 2¾ percent water, acid 10,000 gals 5027-54 ft.

DeKalb's Jacobson 2, 766 ft from w and 554 ft from n lines se 6, blk D-11, J. H. Gibson sur, pump 137 bbls, 2.8 percent water, acid 8000 gals 5023-60 ft.

Upton County: McCamey—E. G. Rodman et al's Ricker-Humble 1, 1321 ft from ne and 2750 ft from nw lines sec 5, blk R, M. S. Denton sur, pump 186 bbls, 25 percent water, natural, lime 2172-77 ft.

Ward County—Gulf's O'Brien 202, se se ne sec 22, blk F, flow 196 bbls, 2-in, shot 296 qts 2565-2659 ft.

Ward County: Spencer—Stanolind's Spencer 5-A, 1995 ft from se and 1991 ft from sw lines H&TC 53, blk 34, flow 152 bbls, ¼-in, lime 2909-17 ft.

WEST TEXAS WILDCAT COMPLETIONS

Howard County: Failure—Cosden's Scott 1, se se se W&NW 59, blk 29, elev 2303 ft, salt 1705 ft, lime 1850 ft, abnd 3078 ft.

Martin County: Failure—Amon Carter et al's Claer 1, 1380 ft out sec lab 22, leag 263, Kent CSL sur, elev 2897 ft, anhydrite 1960 ft, Yates 2830 ft, brown lime 4010 ft, solid lime 4430 ft, abnd 5508 ft.

Pecos County: Failure—Addison Oil Co.'s University 1, c nw nw sec 17, blk 18, abnd in water 1376-78 ft.

Ward County: Discovery — Shell's Sealy-Smith 1, ne ne se G&MMB&A 38, blk A, 3¼ mi ne Monahans, elev 2736 ft, Ellenburger 10,082 ft, flow 2852 bbls 46-gr, gas/oil ratio 2061/1, open 2-in tub, cp 1280 lbs, tp 110 lbs, Ellenburger 10,082-10,364 ft, td 10,545 ft.

WEST CENTRAL TEXAS FIELD COMPLETIONS

Jones County—Clark-Cowden Drl. Corp.'s Mashburn 1, 330 ft out sec blk 85, DeWitt CSL, leag 126, flow 960 bbls, ¾-in, acid 4000 gals 2235-42 ft, td 2368 ft.

T. L. Wheeler et al's Olson 1, 330 ft from nwc s½ H&TC 19, blk 3, elev 1502 ft, flow 304 bbls, 19/64-in, Palo Pinto lime 3226-37 ft.

Shackelford County—R. H. Roark et al's Nail 2, c s½ nw se ET 135, abnd 1625 ft.

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WEST CENTRAL TEXAS WILDCAT COMPLETIONS

Jones County: Oil Discovery—Lewis Prod. Co.'s (was Marry Bros. & Perini) Grogan 1, 1650 ft from s and 330 ft from e lines of tr, M. R. Longoria sur, elev 1675 ft, pump 110 bbls 37-gr oil, natural, Tannehill sand 2128-35 ft, td 2140 ft.

Taylor County: Failure—Fain-McGaha Oil Corp.'s Horton 1, 660 ft out of sec T&P 50, blk 19, elev 1876 ft, top anhydrite 1542 ft, abnd 3105 ft.

WEST CENTRAL TEXAS WILDCAT STARTS

Coleman County—States Oil Corp.'s McClure 1, 1100 ft from s and 2340 ft from w lines T. B. Frizell sur 711, sp.

Eastland County—E. J. Keough-John W. Emch's Bible-Luse 1, 2095 ft from e and 1785 ft from s lines BBB&C 12, blk 2, lcn.

Hamilton County—Rudolph Grossenbacher et al's Stegemulier 1, 660 ft from m/e/e and 3750 ft from m/n/s lines L. W. Dickerson sur 25, blk 4, lcn.

Jones County—Thos. D. Humphrey et al's Boyd 1, 330 ft out nec 198-1/3-ac lse, se part M. A. Fragosa sur 209, mim 3500-ft test.

Shackelford County—C. M. Joiner & C. D. Haggerty's L. Robinson 1, 2150 ft from n and 1550 ft from w lines sec 43, Blind Asylum Lands, lcn.

O. E. Schkade et al's A. P. Schkade 1, 1536 ft from se and 330 ft from ne lines TE&L 570, sp.

TEXAS PANHANDLE COMPLETIONS

Carson County: Skelly's Schafer 151, I&GN 190, blk 3, pump 435 bbls, shot 183 qts, 3197-3250 ft.

Gray County—Magnolia's Fee (Tr. 227) 53, I&GN 15, blk 3, pump 165 bbls, shot 340 qts 2852-2997 ft, td 3010 ft.

Texas Co.'s W. Benedict 4, H&GN 55, blk B-2, pump 196 bbls, shot 320 qts 2934-3000 ft, td 3010 ft.

Hutchinson County—Continental's Sanford 6-C, H&TC 79, blk 46, pump 96 bbls 2665-2715 ft.

Continental's Sanford 4-D, H&TC 77, blk 46, pump 65 bbls, acid 1500 gals 2827-56 ft.

Gray County Production Co.-Sand Creek Oil Co.'s Jasper 3, TC 23, blk M-23, pump 36 bbls, shot 270 qts 3040-3121 ft, td 3163 ft.

J. M. Huber Corp.'s Burch-Weatherly 4, A&B 24, blk Y, pump 216 bbls, acid 4000 gals 3017-3100 ft.

Moore County—Texoma Natural Gas Co.'s Gober 3-SP, Sec 12, blk 1, Poitevent sur, 24,-200,000 gas, 342 lbs rock pressure, 2720-3050 feet.

Texoma's Sneed 28-P, Jos. S. Johnson sur, 9,500,000 gas, 301 lbs rock pressure, td 2867 ft, pb to 2727 ft.

TEXAS PANHANDLE WILDCAT COMPLETION

Hall County: Failure—Humble's Moss 1, 660 ft from n and 1980 ft from w lines of 246-ac tr, SP 119, blk 1, elev 1987 ft, abnd granite 4885-87 ft.

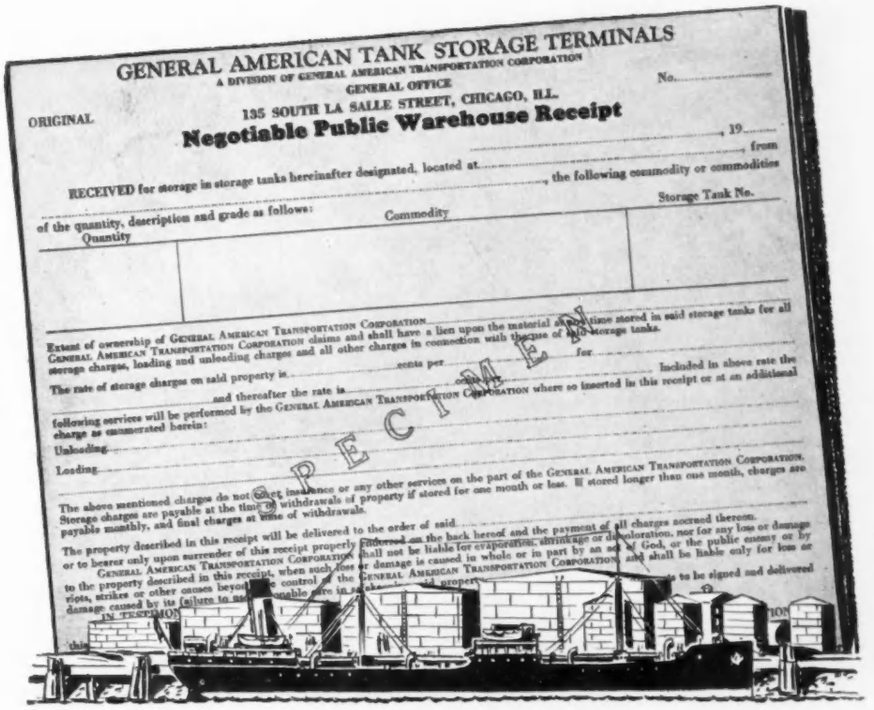
North Texas

Montague Deep Pool Has Three Offsets Completing

Two Archer County wildcats to be cased for production test after drilling to Ellenburger. District's record depth producing pool in Montague County has trio offsets to discovery in process of completion. First Mississippi well in Burns-Ragland pool makes good flow.

Archer County: Sinclair Prairie's Hood 2, mile west of Hull-Silk field and on a separate high, logged dry Ellenburger at 5005-5281 ft, and will be plugged back to try for production in Mississippi, topped 4949 ft. It is appreciably higher than company's Hood 1, a 5180-ft failure 3200 ft to northeast. Perry Browning's Fee 1, 1⅛ miles northwest of Vogtsberger pool but separated from same by intermediate 5147-ft failure, will be cased to test broken saturation in Ellenburger at 5220-5321 ft, else in 4900-ft Strawn sand. Browning prospect entered Bend at 5125 ft, 40 ft high.

Montague County: Sinclair Prairie is completing 3 offsets to its Forestburg pool discovery in Marble Falls sandy-lime. Jones 2, 1380-ft southeast outpost, is slightly high, having entered Bend at 6486 ft and Marble Falls at 6910 ft, with broken pay at 7051-7133 ft, and Jones 3, northwest of producer, was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unloading 5½-in at 7118 ft, broken pay 7121-7247 ft, topped Bend 6568 ft and Marble Falls 6970 ft. Jones 4 is lowest of group, and was testing broken pay at 7140-7220 ft in Marble Falls, topped at 6947 ft. Sinclair Prairie's Henderson 2, twin to 6935-ft junked wildcat on Denver prospect, drilling at 7030 ft, having recovered 240 ft gas-cut mud on drill-stem test at 6956-79 ft in Viola, topped at 6954 ft. Jerry Hawkins' Lowrie 1, 4½ miles northwest of Bowie, tested dry in Ellenburger at 7284-7384 ft, then plugged back to drill stem Simpson porous zones at 6816-20 and 6836-52 ft.

Young County: L. T. Burns et al's Williams 1, east offset to Burns-Ragland pool's Bend discovery, established a new oil zone in flowing an average of 30 bbls of oil hourly on 6-hr test through ¾-in, acidized 2000 gals through perforations at 4882-4910 ft of saturation in upper Mississippi, topped at 4882 ft, 7 ft low to pool discovery, which was not given decisive test in this lower lime. Minimum of 4 wells to Mississippi has been scheduled for Williamson deep pool by Ennisbrook Oil Corp., headed by Elmer J. Boeseke, Jr., of Los Angeles, following purchase of Thos. D. Humphrey's 2300-ac discovery block with 3 flowing Mississippi and 1 Bend pumper for $100,000 cash and $300,000 payable from 3/16 of the ⅞ production interest.

Markets: Removal of production holidays in some of the most productive fields in the district, including the K-M-A Ellenburger area, and the granting of fewer off days in others will make considerable high-gravity oil available for north-bound shipments. Further production increases are anticipated when East Texas field crude is diverted from trans-district lines to the government's 24-inch carrier, otherwise considerable line capacity will be idle.

NORTH TEXAS FIELD COMPLETIONS

Archer County—White & Duncan's Richardson 2, 330 ft from nwc n½ of s-80-ac tr, W. C. McCune sur A-943, pump 10 bbls, broken sand 1235-37 ft, oil sand 1237-40 ft.

W. C. Young and Burk Roy, Co.'s Richardson 1, 349 ft from s and 2895 ft from e lines of E. L. Ry. sur A-687, abnd 1274 ft.

Clay County—W. T. Hutcheson, Jr. et al's Taylor 1, 750 ft from nw and 330 ft from ne lines blk 38, Bacon subdiv, pump 3 bbls oil, 15 water, 1118-26 ft.

Webb-Taylor Oil Co.'s Benjamin O&G Co. 1, 330 ft out nec nw sec 51, Palo Pinto CSL sur, abnd 900 ft.

Wichita County — Akin - Dimock - Costley's Hardin 1, 1650 ft from s and 330 ft from e lines O. Farish sur A-383, abnd 1623 ft.

Martin Properties' Cooper 2, sec 5, Henry Hastie sur A-92, abnd 1328 ft.

Wichita County: K-M-A Ellenburger—E. C. Oil Co.'s Mangold 33-E, 275 ft from e and 467 ft from s lines n½ blk 33, P. Castleman sur, flow 402 bbls, 2-in natural, 4348-80 ft.

Kadane-Griffith Oil Co.'s Mangold 9-A-E, 1865 ft from s and 660 ft from e lines blk 38, P. Castleman sur, flow 1544 bbls, ½-in, acid 3000 gals 4190-4314 ft.

Lewis Prod. Co.'s Wichita Nat'l Bank 10-E, 4800 ft from s and 521 ft from w lines W. H. Spillers sur, flow 497 bbls, ¾-in, acid 3000 gals 4140-4290 ft.

NORTH TEXAS WATER INPUT

Archer County — Fain-McGaha Oil Corp.'s Ferguson 31-C, SP 2, A-968, sand 647-58 ft, td 667 ft.

Fain-McGaha's Ferguson 32-C, SP 2, sand 648-58 ft.

Fain-McGaha's Ferguson 33-C, SP 2, sand 648-60 ft, td 666 ft.

NORTH TEXAS WILDCAT COMPLETION

Archer County: Discovery—Geo. W. Cooper et al's C. Knight 1, 330 ft out nec w½ blk 69, KWVFL sur, mile w Holiday, KMA lime 4110 ft, detrital 4886 ft, Ellenburger 5015 ft, flow 131 bbls, ¼-in, cp 720-480 lbs, tp 440-151 lbs, acid 4000 gals, detrital perf 4888-4903 ft, dry Ellenburger 5015-28 ft.

NORTH TEXAS WILDCAT STARTS

Jack County—Joe A. Worsham et al's Hensley 1-a, 2080 ft from n and 3400 ft from w lines Thos. Martinez sur A-388, 100 ft ne 5300-ft jkd test, dr 1390 ft.

Montague County—S. H. Fagadau et al's J. C. LaForce 1, 660 ft out nwc 477-ac tr, J. Short sur A-664, lcn.

East Texas

Chapel Hill Extension Two Miles South Indicated

Cherokee County deep prospect running pipe. Two-mile south extension looms for Chapel Hill field, which has been assigned 4 new tests. Ten rotaries operating in Coke 6-well pool, Wood County.

Cherokee County: Humble's Curtis 1, Larissa prospect, proved dry in Travis Peak at 10,475-604 ft, elevation 490 ft, and is plugging back to run 5½-in pipe to try for completion in Pettit and Rodessa zones. Magnolia's Braly 1, deep test for Mixon geophysical high, was drilling shale at 1350 ft.

Smith County: Sinclair Prairie's Swinney 1, 2 miles south of gas-distillate production in Chapel Hill field, was drilling shale at 7215 ft, and on first anhydrite marker is structurally flat with nearest oil production, thus assuring production. Company has extensive lease holdings and has started operations on 4 tests in north portion of field.

Wood County: Development of the Coke pool, which has 10 active rigs, has become the greatest in the district. More rigs are to be moved in by independents. Considerable new drilling will be forced by completion of current tests, all believed to be within the producing contour, except possibly Magnolia's White 1, south outpost that is estimated 90 ft low, and drilling lime at 5690 ft. Amerada authorized 3 more tests, having 5 drilling and 4 wells shut in for a market outlet.

EAST TEXAS FIELD COMPLETIONS

Smith County: Chapel Hill — Magnolia's Jackson 1, 581 ft from w and 660 ft from s lines 173.84-ac lse, L. H. Dillard sur, top Pettit porosity 8229 ft, flow 160 bbls with flow valves, acid 9000 gals, perf 8228-98 ft, td 8349 ft.

Wood County: Hawkins—Humble's Faulk 6, 1952 ft from s and 467 ft from w lines 163.38-ac lse, J. Pollock sur, flow 395 bbls natural ¼-in, Woodbine, perf 4696-4702 ft, and 4829-34 ft, td 4866 ft.

EAST TEXAS WILDCAT COMPLETIONS

Navarro County: Failure—Falcon Co.'s Keitt 1, 660 ft out nwc 600-ac lse, blk 66, Sam Benton sur, 10 mi w Currie, elev 466 ft, Austin 1340-1730 ft, Woodbine 1975 ft, Buda 2312 ft, Georgetown 2435 ft, 1st anhydrite 3820 ft, Pettit 4350 ft, Travis Peak 4443 ft, Buckner 6055 ft, Smackover lime 6151 ft, abnd 6455 ft.

EAST TEXAS OLD WELL DEEPENED

Robertson County: Failue—Kirby-Morrison-Moore's Martin 1, 467 ft out n corner W. R. Cox sur, otd 2620 ft, abnd 3005 ft.

EAST TEXAS WILDCAT STARTS

Houston County — Russell Grimes et al's Ellis 1, 2700 ft from e and 700 ft from s lines of John Daly sur, Procella prospect, mim 6000-ft Woodbine test.

Hunt County—R. W. Burnett et al's Jones 1, 660 ft out nwc 50-ac lse, J. H. Wallace sur, lcn.

Morris County—J. N. Buchanan-R. P. Lester's Ellis 1, 660 ft out nwc 356½-ac lse, W. O. Matthews sur, lcn Paluxy test.

Southwest Texas

Extension to Sheridan Pool, Colorado County, Finaled

Sheridan field, Colorado County, extended southeast. Sun completes discovery producer in Starr County. Second and third wells in recently discovered Stewart field core pay sands.

Colorado County: Shell Oil Co. has extended Sheridan field production more than mile southeasterly with completion of Plow Realty 5, flowing 165 bbls of distillate and a small amount of salt water. The well also produced 2,800,000 ft of gas daily through ¼-in choke. Although definite perforations were not announced, the production is from the 9387-ft sand. The well was spudded in December, 1941, and drilled to 11,497 ft in Wilcox. Several horizons have been tested.

Starr County: Sun Oil Co has completed discovery well, Garza 7, between North Sun and Kelsey Bass fields. With

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sand topped at 4515 ft, the wildcat flowed 159 bbls of 48.3-gravity oil with tubing pressure 830 pounds and casing 1050 pounds. Several dry holes have been drilled around this discovery. Operators set 5½-in casing on bottom at 4586 ft.

Jackson County: W. Stewart Boyle is making production tests in two wells in Stewart field, a reserve the operator recently discovered. Boyle's Copsey 1 cored 35 ft of oil sand and set pipe at 5016 ft, total depth. Boyle drilled Meyer 1 to 5050 ft cutting through a fault. Although sand ran low in the well, sufficient amount was logged to make a producer. Boyle's field is west of Ganado field.

Gulfboard Oil Corp. and Salt Dome have projected a wildcat test two miles west of Stewart field. Located in George Sutherland survey, the well will be on Mercer acreage, east of Mustang Creek.

Bee County: Magnolia is testing Buckner 1, wildcat 1½ miles west of Berclair townsite. Bottomed at 10,450 ft and with 5½-in casing cemented at 10,400 ft, a series of tests are scheduled to be made below the 10,000-ft level. A sand at 10,125-148 ft showed for gas production.

Wilson County: First location since field was discovered has been staked in Poth area by Superior and Progress Petroleum Co. The discovery was completed in Wilcox at 4090-4100 ft several weeks ago. It was started by Holland Oil Co. and later taken over by Superior.

Jim Wells County: Shell is reported making further tests on Jones 1, wildcat midway between Seeligson and Von Blucher fields. Although no official information has been released, it is understood that tests are being made in deeper sand horizons. The hole is bottomed around 8000 ft.

LOWER TEXAS COAST COMPLETIONS

Bee County: West Tuleta—Mills Bennett & Anderson Pritchard's Perez 1, 660 ft fr s & el's sec 8, Ragley subdvn, Chittim Miller ranch, J. M. Uranga grant, 5½-in 7768 ft, perf 7590-7600 ft, flow gas-distillate, shut in, no gauge, td 7760 ft.

Bee County: South Caesar—Luling's Slick 2, 495 ft fr s & el & 3597 ft fr swl of W. F. Hodge sur 175, sand 6593 ft, 5½-in 6626 ft, perf 6618-22 ft, 225 bbls, 5/32-in, tp 1690, cp 2360, td 6626 ft.

Jackson County: North LaWard — Cities Service's Graves 1, 360 ft fr sl & 2970 ft fr wl 240-ac lse Patrick Scott sur, blk 18, Pickering ranch subdvn, 5½-in 5672 ft, perf 5208-12 ft, 280 bbls, ¼-in, tp 340, cp 500, td 5673 ft.

Jackson County: Maurbro—Cities Service's Pritchett 2, 467 ft fr wl & 457 ft fr nl 100-ac lse in ne cor 400-ac tr Abraham M. Clare sur, set 5½-in 5284 ft, perf 5218-35 ft, 94 bbls 3/16-in chk, tp 160, cp 320, td 5866 ft.

Jackson County: Harmon — Gulfboard's Branch 1, 660 ft fr n & el's of M. T. Simons sur 24, sand 5364 ft, 5½-in 5460 ft, perf 5364-82 ft, 175 bbls, 3/16-in, gor 265-1, td 5565 ft.

Jackson County: Mayo—Gulfboard's Burditt 1, 467 ft fr n & el's 52-ac tr M. L. York sur, sand 5321 ft, 5½-in 5460 ft, perf 5324-35 ft, 240 bbls 29.8-gr, 5/32-in, gor 523-1, td 5470 ft.

Jackson County: West Ranch—Magnolia's West 254, 3170 ft fr nel of 11,582-ac lse, Ramon Musquez gr, 5½-in 5779 ft, perf 5774-79 ft, 165 bbls 3.3-gr, 9/64-in, tp 850, cp 1025, gor 410-1, td 5779 ft.

Jackson County: Francitas—Skelly's Millus 2, 467 ft fr ne & nwl's of 80-ac lse, J. D. Newell sur, sand 7377 ft, 5½-in 8000 ft, flow 57 bbls 47-gr, ⅛-in, gor 9800-1, tp 2400, cp 2700, td 8000 ft.

Jackson County: Ganado—Texas Co.'s Sillman 3, 660 ft fr s & el's of 241-ac tr Morris & Cummings sur 3, sand 6625 ft, perf 6625-28 ft, flow 152 bbls 43.2-gr, ⅛-in, gor 1575-1, tp 1520, td 6654 ft.

Jim Wells County: Koopman—Coastal Refineries' Koopman 1, 510 ft fr s&el's 120-ac lse sec 20, Theo Plummer's subdvn Camada ranch, abnd 6000 ft.

Jim Wells County: Seeligson—Transwestern's Dunlap 15, 660 ft fr n&el's 970-ac lse in SKK sur 181, 6-in 6101 ft, perf 6046-50 ft, 127 bbls 41.3-gr, 3/32-in, gor 707-1, td 6131 ft.

Kleberg County: East Stratton—Humble's King Ranch-Paso Ancho 15, Paso Anchode Adajo gr, sand 6484 ft, flow 109 bbls 42.2-gr, ⅛-in, tp 800, cp 750, td 6685 ft.

Nueces County: East Stratton—Southern Minerals' Stratton 46, 1450 ft fr nl & 1000 ft fr el sur 203, 5½-in 6642 ft, sand 6610 ft, perf 6610-26 ft, 75 bbls 42.1-gr, 7/64-in, gor 910-1, td 6645 ft.

Victoria County: East Placedo—Stanolind's Vendenberg & Hill 14, 730 ft fr sel of 996-ac lse E. Benavides gr, 5½-in 6875 ft, perf 6868-71 ft, 139 bbls, ⅛-in, td 6875 ft.

LOWER TEXAS COAST WILDCAT COMPLETIONS

Bee County: Failure—W. C. McBride & W. Earl Rowe's Deloney 1, 660 ft fr se & swl's 310-ac lse, John Thomas Molloy sur, 3½ mi nw Skidmore, abnd 4585 ft.

Jackson County: Failure—Salt Dome & Guy Warren's Zajicek 1, 40-ac tr George Sutherland sur, 2 mi s West Ganado, abnd 6514 ft.

Jim Wells County: Failure — Hickok & Reynolds' Doering 1, Magnolia City area, J. Poitevent sur 205, abnd 5923 ft.

LOWER TEXAS COAST WILDCAT STARTS

Victoria County—A. C. Vernor's Stubbs 1, Colletta Creek area, 2900 ft sw alg nwl fr n cor of 501-ac lse, Rafael Manchola gr, lcn 5000-ft test.

SOUTHWEST TEXAS FIELD COMPLETIONS

Duval County: Conoco-Driscoll — Continental's Driscoll 81, 3100 ft fr el of 12,000-ac lse, Santa Rosalia gr, sand 3288 ft, perf 3288-95 ft, flow 26 bbls 31.5-gr, ¼-in, gor 33,782-1, td 3342 ft.

Continental's Driscoll 82, 3600 ft fr el 12,000-ac lse, Santa Rosalia gr, abnd 3345 ft.

Duval County: Seven Sisters—George W. Lyles' Chernosky 4, 330 ft e of el of 20-ac lse GBCNG sur 226, sand 2234 ft, 5½-in 2236 ft, pump 33 bbls, 2238 ft.

Duval County: Sejita—Standard of Texas' Barrera 1, 467 ft fr s&wl's 350-ac lse, Santa Cruz de Concepcion gr, on ne flank, abnd 6290 ft.

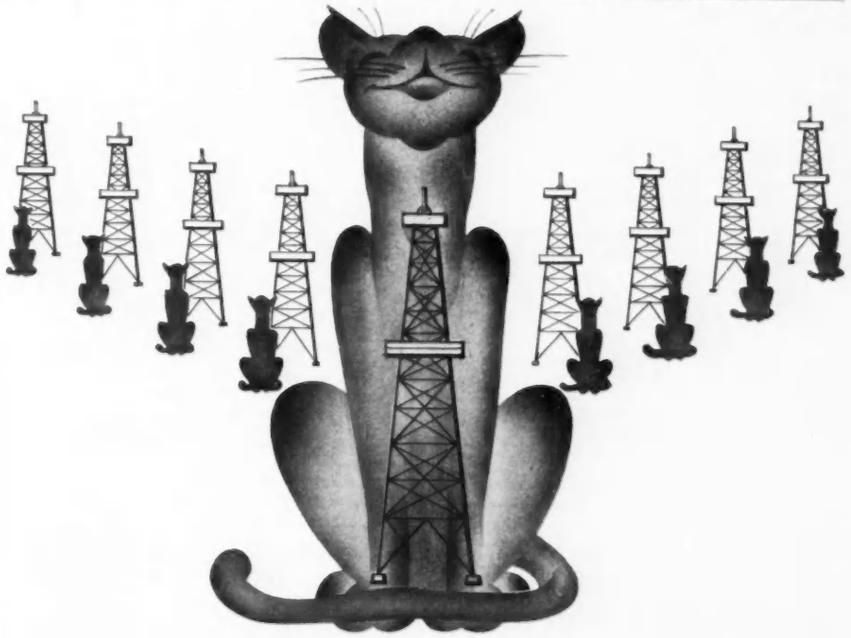
Jim Hogg County: Randado—M. L. Massingill's McLean 1, 40-ac lse, blk 11, sur 147, abnd 3505 ft.

Jim Hogg County: Colorado—Sun's East 1, 539 ft fr n&sl's & 330 ft fr wl Las Moretas gr, sand 3163 ft, flow 130 bbls 47.4-gr, 3/16-in, gor 109-1, td 3167 ft.

Starr County: Rincon—Continental's Slick 86, 990 ft fr el & 1650 ft fr nl CCSDRGNG 222, abnd 4025 ft.

SOUTH TEXAS WILDCAT COMPLETIONS

Starr County: Discovery—Fidelity's Sugarland 1, 100-ac tr, porcions 91 & 92, 4½-in



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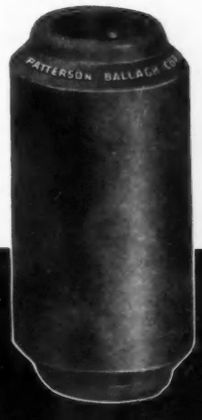

PATTERSON-BALLAGH LIP PROTECTORS

4025 ft, perf 3970-80 ft in Frio, flow 140 bbls 44.5-gr, 3/16-in, td 4200 ft.

Zapata County: Failure—Dulup Oil Co.'s Garza 5, 400-ac lse, Comitas gr, abnd 2015 ft.

SOUTH TEXAS WILDCAT STARTS

McMullen County—H. K. Boysen's Hagist 1, 2½ mi ne San Jose field, 1980 ft fr wl of HTC 9, lcn 4200-ft test.

Starr County—Sun's Cortez 1, 660 ft fr n&el's share 85, porcion 95, lcn 4000-ft test.

Webb County—Texas Co.'s Jones 1, 2½ mi sw Moca field, 1980 ft fr n&el's Alf Pruitt sur 1640, 2500-ft test.

SOUTH CENTRAL TEXAS WILDCAT STARTS

Williamson County—Herman Plath's Freels 2, 660 ft fr nl of 245-ac tr, Williford Cartwright sur, Thrall area, lcn 1200-ft test.

Wilson County—L. D. Ormsby and Henderson Coquat's Caldwell 1, 6 mi ne Floresville, John W. Brown sur, lcn 3000-ft test.

Texas Gulf Coast

Production Pipe Set In Two Deep Wildcats

Production pipe set in deep wildcats in Harris and Montgomery counties. More development due in Mercy field with additional wells planned.

Montgomery County: Superior has cemented 7-in casing for production test in Frost 1, 13,074-ft wildcat northeast of Lake Creek field. Although detailed information has not been released on this wildcat three miles from Lake Creek production, sufficient shows are believed to have been encountered to make a producer. Pipe was set on bottom, which indicates that testing will begin in Wilcox sand. Wells at Lake Creek have been tested in several different horizons. A producer in the wildcat will add considerable territory to be drilled, either extending the field that distance or opening a new field.

In the Magnolia area LaGloria Corporation's Grogan-Cochran 1 is drilling around 8650 ft, nearing top of Wilcox. Projected depth is 10,500 ft.

Harris County: Jack W. Frazier has cemented 5½-in pipe at 8968 ft in Wood 2, wildcat in Dyersdale field. Drilled to 9206 ft, it is understood this well encountered oil shows in upper part of Cook Mountain as well as other horizons. Frazier drilled the test approximately 700 ft deeper than any other well in area. A large number of dry holes have been drilled. Dyersdale produces from Miocene around 3400 ft and Frio around 4000 ft.

Hebert & Smith have applied for permit to drill Hutcheson 1, 4500-ft test of Frio on Cross Timbers prospect, Malcom Terrel survey. This is on acreage farmed out by Stanolind and will test sands that produce at Dyersdale. Besides Stanolind, Tide Water is a substantial leaseholder.

San Jacinto County: Mercy field outpost development is due with Shell preparing to drill Goldston 2, 1400 ft westerly from nearest producer. Located in Kelly Holliday survey, a company rig will be used to drill to Wilcox. Shell has spudded Foster Lumber 1, south offset to Atlantic's Palmer 1 in east part of field, while Atlantic is drilling below 8000 ft in Beshell 1, east outpost.

Wildcats: Gulf set 9⅝-in casing at 6853 ft and is drilling in Ehlert 1, deep test northeast of Needville field, Fort Bend County. Deeper horizons will be tested, the field producing from shallow levels. Stanolind has abandoned Buckner Orphans Home 1, 11,365-ft wildcat, Matagorda County.

The Texas Co. is spudding Pierce Est. 118, proposed 7500-ft wildcat test on northeast side Withers field. Wharton County. This will be one of deepest tests ever drilled in area.

Humble has abandoned Goolsbee 1, 10,214-ft Wilcox wildcat in Warren area, Tyler County. Oil and salt water were recovered on drill-stem test around 7625 ft.

TEXAS GULF COAST FIELD COMPLETIONS

Chambers County: Fig Ridge—Texas Co.'s Broussard Trust 9, 660 ft fr s&wl HTB 94, 5½-in 8670 ft, perf 8563-71 ft, 744 bbls, ¼-in, tp 1300, gor 690-1, sand 8558 ft, td 8670 ft.

Jefferson County: Stowell—Glenn H. McCarthy's McFaddin 1, 330 ft fr n and 990 ft fr el 51-ac tr, Theo. F. Koch subdiv B. A. Vacocu lge, 5½-in 9260 ft, perf 8756-58 ft, 237 bbls 33.7-gr, ⅛-in, tp 1300, cp 1200, gor 259-1, td 9500 ft.

Jefferson County: West Beaumont—Stanolind's Treadway 6, 603 ft fr w and 990 ft fr sl lot 2, Langham subdvn, Hezekiah Williams sur, sand 5358 ft, 5½-in 5390 ft, perf 5358-88 ft, 118 bbls 26.9-gr, 3/16-in, tp 220, cp 540, gor 305-1, td 5390 ft.

Wharton County: Withers—Texas Co.'s Pierce Est. 113, 3628 ft s 62 deg w and 467 ft s 28 deg e of ne cor Pettus sur, sand 5380 ft, 5½-in 5380 ft, flow 84 bbls, ¼-in, tp 250, td 5380 ft.

TEXAS GULF COAST WILDCAT COMPLETIONS

Brazoria County: Failure—Glenn H. McCarthy's Munson 2, Bailey's Prairie prospect 1650 ft fr n and 330 ft fr wl 2550-ac tr, J. B. Bailey sur, abnd 10,361 ft.

Harris County: New Sand—Amerada and Stanolind's Dopslauf 1, 466 ft fr n and 526 ft fr e&wl 10-ac tr, Francis Fry sur, Satsuma area, old well drilled deeper, perf 7270-80 ft, 160 bbls, ⅛-in, tp 1150, gor 820-1, td 8050 ft.

Trinity County: Failure—Stanolind's Texas Long Leaf 1, Red Branch area, 1000-ac tr, F. Martinez sur, abnd 5508 ft.

TEXAS GULF COAST WILDCAT START

Liberty County—Hebert & Smith's Conger 1, Nome area, 835 ft fr w and 521 ft fr sl 40-ac unit in 200-ac tract, John Blair sur A-4, lcn 7800-ft test.

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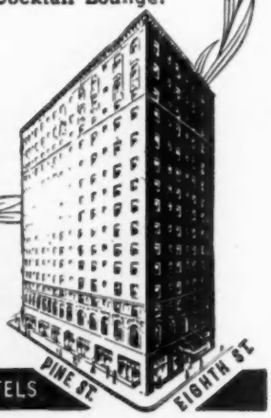

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Louisiana Gulf Coast

Second Well to Test Sparta Sand at Pine Prairie

New development scheduled at Pine Prairie with old well to be deepened and new flank test to start. Well at East White Lake completed in two sands.

Evangeline Parish: Texas Co. is preparing to start drilling on LeDanois Land 3, second location in the Sparta sand area on southwest flank of Pine Prairie dome. Located 660 ft northeast of the Sparta sand discovery, operators plan to drill to 10,400 ft. The discovery well of the new sand, LeDanois Land 2, produced from 9447-70 ft.

C. & I. Production Co. is reported planning to drill deeper an abandoned test south of Pine Prairie production. L. M. Josey abandoned Haas Est. 1 at 8508 ft, February 15, 1942, and present plans call for the hole to be drilled to 10,000 ft for test of sands producing from Sparta on southwest flank. It is southwest offset to Humble's Ortego 1 which is testing 26 ft of sand at 8045 ft.

Vermilion Parish: Union of California has dually completed Vermilion Parish School Board 4 in East White Lake field. This well was perforated at 6427-32 ft and flowed 258 bbls of oil through 9/64-in choke with 1000 pounds tubing pressure. The second set of perforations was made at 6018-48 ft, flowing 227 bbls through 9/64-in choke with 800 pounds casing pressure. East White Lake is one of the few South Louisiana fields that has a dual completion program.

Ascension Parish: Humble is drilling below 10,500 ft in Gantreau 1, deep wildcat on Duplessis prospect, 8-9s-3e, after encountering show of gas at 10,435-40 ft. Considerable coring was reported done in this horizon before drilling was resumed.

Iberville Parish: St. Gabriel field has its first location in several months with Shell preparing to drill Natalbany 5, SE 18-9s-2e. This test is projected to 8600 ft with George Echols as contractor. Echols discovered the field two years ago on Shell farmout, the two operators owning all production.

SOUTH LOUISIANA FIELD COMPLETIONS

Evangeline Parish: Pine Prairie — Gulf's Schlicher-Thomas 1, 36-3s-1w, 5½-in 7858 ft, perf 7850-65 ft, 288 bbls 5/32-in, tp 1400, td 7870 ft.

Evangeline Parish: Ville Platte—Continental's Adam Tate-Unit 37, begin w cor Tate tr, go se alg swl 3163 ft, thence ne at ra 7 ft in 43-4s-2e, perf 10,155-92 ft, flow 84 bbls 39.8-gr, 16/64-in, td 10,186.

Jefferson Parish: Barataria—Gulf's Rathborne 1, 2-16s-23e, abnd 8210 ft.

Jefferson Parish: Westwego—Titanic's Marrero 3, fr most s'ly cor sec 1-13s-23e, go e 950 ft, thence 1600 ft to len in 1-13s-23e, abnd 9852 ft.

Jeff Davis Parish: South Roanoke—Union Sulphur's TRS Farms 3, 660 ft n and e of sw cor 14-10s-4w, set 5½-in 10,624 ft, perf 9570-82 ft, 35 bbls oil and 2,500,000 cf gas, 16/64-in chk, gor 60,000-1, tp 3100-1, td 11,015 ft.

Rapides Parish: Big Island — Roland S. Bond's Overton 1, 1980 ft n and 1934 ft w of se cor 15-4n-3e, Wilcox 3967 ft, abnd 6914 ft.

Terrebonne Parish: Pointe au Fer—Texas Co. & Barnsdall's State-Pointe au Fer 1, 80 ft n and 1458 ft e of sw cor sec 26 in Locust Bayou, 26-20s-11e, abnd 11,147 ft.

SOUTH LOUISIANA WILDCAT COMPLETION

Iberia Parish: Discovery — Humble's Petit Anse 2, 2334 ft n and 1197 ft e of sw cor 25-13s-5e, 7-in 9012 ft, perf 8994-9002 ft, 288 bbls 31.5-gr, 182,000 gas, 5/32-in, tp 1425, td 9242 ft. Opens Avery Island field.

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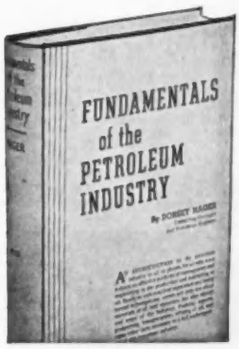

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California

Shallow Wells Being Drilled at South Belridge

Shallow outpost area being developed at Belridge, Kern County deep test in old Kern Front field is failure. Two Ventura County tests are disappointing.

Kern County: Off the southeastern tip of the South Belridge field, in Kern County, E. A. Parkford has completed No. 2 pumping 100 barrels daily, 14-gravity oil from 1097 ft. Operator has a second project nearing completion and expects to eventually be able to drill upwards of 20 shallow producers. Next well to be completed is bottomed at 1102 ft in laminated shale with top of oil sand at 922 ft.

Kern County: Standard Oil Co.'s No. 42-9 deep test in the Kern Front field, 9-28-27, has been bottomed in basement rock at 6211 ft after entering zone at 6195 ft, is being plugged back to 2460 ft for completion in the Chanac zone. Insufficient showings were encountered in lower zone to warrant test.

Madera County: Preparations are being made by The Texas Co. for a wildcat well in the Chowchilla area, seeking gas.

Ventura County: Oil Production Maintenance, Inc., has abandoned Byhara 1, wildcat in the Ojai district, 12-4-22, bottomed at 1535 ft, which produced 2 to 3 barrels daily of heavy oil and considerable quantities of water over a period of about six months.

Ventura County: Chanslor - Canfield, Midway Oil Co.'s deep test, Hobson, C-10, in the Rincon field, has been plugged back to 4500 ft and will be whipstocked to the north. Well was taken to 10,065 ft, last cores showing wet gray sand with streaks of shale showing 39 degree dips. Fair looking oil sand was cored at 9716-9788 ft. The hole correlates about 180 ft lower than prior deep test, company's C-3.

CALIFORNIA FIELD COMPLETIONS

Fresno County: Coalinga—Standard's 7-25A, 892 ft n, 329 e sw cor 25-19-15, pump 167 bbls 26.1-gr, perf 3794-3968 ft, Kreyenhagen 3960 ft, oil sand 3625 ft, td 3974 ft.

Fresno County: Helm — Amerada's Clover 75-34, 2970 ft s, 990 w ne cor 34-16-17, flow, no est, perf 8014-8019 ft, Kreyenhagen 7580 ft, Temblor 5904 ft, McLure 5686 ft, Eocene 7975 ft, td 8223 ft.

Fresno County: Kettleman North Dome—KNDA's 343-28J, 1962 ft n, 669 ft w se cor 28-21-17, flowed 109 bbls, 245 ft, perf 10,620 ft, brown shale 5745 ft, Temblor 7008 ft, td 10,656 ft.

Kern County: Belridge South — General's Belridge 3-26, 233 ft n, 1165 e w¼ cor 3-29-21, pump, no est, perf 1060-1050, 1035-1010, 875-860 ft, td 1098 ft.

Kern County: Ten Sections — Shell's KCL A-73-29, 1657 ft s, 4280 e nwc 29-20-26, flowed 465 bbls 35.1-gr, 125 ft perf 8216 ft, 12/64-in bean, 800/1700 lbs, td 8220 ft.

Los Angeles County: Del Valle—Standard's Sapulveda 3, 349 ft n, 1667 e swc 17-4-17, flow 1576 bbls 33.8-gr, 1-in, 590/1150 lbs, 77 ft perf 5118 ft, td 5120 ft.

Orange County: Huntington Beach—Signal's Signal-Bolsa 34-A, 2600 ft n, 1250 w swc S. O. Co.'s Bolsa "C" lease, 33-5-11, flow 500 bbls 25.2-gr, 850 ft perf 4875 ft, td 4900 ft.

CALIFORNIA WILDCAT COMPLETIONS

Fresno County: Riverdale area Failure—Amerada's Lawton 58-25, 330 ft n, 2310 w sec 26-17-19, Kreyenhagen 7635 ft, Eocene 8000 ft, Cretaceous 8150 ft, Slate 11,790 ft, abnd 11,990 ft.

Kern County: Devils Den area Failure—Devils Den Oil Co.'s Jacquelyn 4, 860 ft s, 360 w c 26-25-18, abnd 602 ft.

Kern County: Grapevine - Wheeler Ridge Failure—Reserve Oil & Gas Co.'s Tejon 33-6, 330 ft s, 330 w e¼ cor 33-11-19, Top oil zone approx 4480 ft, upper 30 ft showed fair cut, lower section all wet, abnd 4640 ft.

Los Angeles County: La Mirada area Failure—Texas Co.'s McNally A-2, 870 ft n, 160 e sw cor, 15-3-11, recovered water, mud and gas on formation tests at intervals 7480 to 9150 ft, abnd 9658 ft.

Los Angeles County: San Fernando area Failure—Barnsdall's T.I.T. No. 1, 990 ft s, 2300 w ne cor 30-3-15, bottom in Pliocene shale 8035 ft, no showings, abnd.

Merced County: Turlock area Failure—Tide Water-Seaboard's Turlock Land 37-18, 990 ft n, 1650 e sw cor 18-6-11, Kreyenhagen 3442 ft, Cretaceous 6300 ft, green sand 3576 ft, abnd 6505 ft.

CALIFORNIA WILDCAT STARTS

Humboldt County — Texas Co.'s Holmes-Eureka No. 2, 22-3-1, rig. Eureka area.

Kern County—Fred Jasper, Jr.'s No. 1, 16-26-27, lcn. Dyer Creek area.

Michigan

Large Percentage of Starts Are Wildcats

Exploratory work increases with 15 wildcats in 35 new starts since August 1. Tuscola field extension brightens Eastern state outlook.

Tuscola County: Norton & Mell's Beatty 1, SW NW SE 30-14n-8e, Akron Township, flowed 210 bbls initially from Monroe lime at 3429 ft, reviving prospects in district. Location is over half mile southeast of developed area.

Lake County: Ohio Oil Co. abandoned Consumers 1, N½ NE SE 36-19n-12w, South Newkirk Township wildcat, after testing Traverse, Dundee and Monroe zones to 3750 ft. This had been regarded as one of summer's best geological prospects.

Missaukee County: Sun Oil Co. is installing pumping equipment to test Horner 2, 11-24n-5w, Norwich Township. This wildcat has flowed 26 to 46 bbls of oil daily from Monroe lime at 4437 ft, cutting 2 to 10 percent water.

Clare County: Freeman Oil Co.'s Yeager 1, NE SE SE 25-20n-3w, Franklin Township, four miles south of Headquarters pool, logged Dundee lime at 3818 ft and was drilling at 3890 ft without saturation.

MICHIGAN FIELD COMPLETIONS

Clare County: Headquarters — Pure's Bonninghousen A3, n½ ne se 4-2n-3w, Traverse lime, flow 96 bbls 3 hrs, 3323 ft.

Clare County: Hamilton—Sun's Stanley 1, c nw 15-19n-3w, dry 1336 ft.

Clare County: Winterfield — Taggart Bros. Co.'s Vizina 115, c se 27-20n-6w, Stray sand, 210,000 gas, 1363 ft.

Taggart Bros. Co.'s Kirschner 120, c nw 27-20n-6w, Stray sand, 475,000 gas, 1343 ft.

Taggart Bros. Co.'s Phares 77, c ne 32-20n-6w, Stray sand, 12,100,000 gas, 1309 ft.

Osceola County: Reed City—Ohio Oil Co.'s Bauer 2, n½ se sw 5-17n-10w, Monroe lime, flow 400 bbls, 3549 ft.

Roscommon County: Richfield — Sun's State B1, n½ ne ne 30-24n-1w, Monroe lime, swab 31 bbls, 4253 ft.

Tuscola County: Akron-Wisner — Norton & Mell's Beatty 1, sw nw se 30-14n-8e, Monroe lime, flow 209 bbls, 3429 ft.

MICHIGAN WILDCAT COMPLETIONS

Allegan County: Failure — Muskegon Dev. Co.'s Pelka 1, e½ ne ne 19-4n-12w, Traverse lime 1562 ft, dry 1592 ft.

Arenac County: Failure—Rayburn & Basin's Wojtowicz 1, n½ nw se 22-19n-4e, Dundee lime 2748 ft, abnd 3111 ft.

Isabella County: Failure—Michigan Devon-

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EQUIPMENT WANTED

■ Operator wishes to purchase, for cash, three or four used Cummins Diesel LI-600 drilling engines with chain transmission, slush pump and hoisting equipment of size of Wilson Giant or Titan draw works. Please communicate all particulars, including prices, to: P. O. Box 5051, Metropolitan Station, Los Angeles, Calif.

OIL INDUSTRY PRINTED FORMS

■ Priority forms, drilling, gauge, production inventory, payroll, pipe tally, material transfer and more than fifty other field and office printed forms, regularly used by oil companies, immediately available to meet your requirements. Complete catalog on request. Address Oil Form Dept., Gulf Publishing Company, Houston, Texas.

ADVERTISING RATES

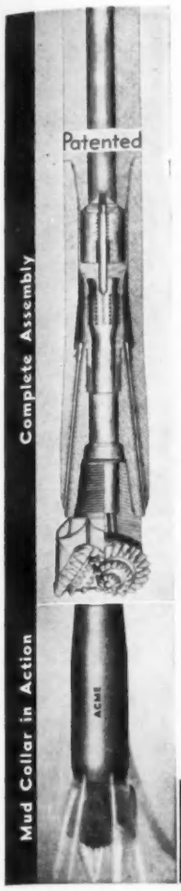
for the

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch and limited to not more than two inches an insertion. Remittance must accompany copy which should be sent to:

Trading Post Section, THE OIL WEEKLY

P. O. Box 2608 — Houston, Texas



Let Acme's New MUD-COLLAR Help You Lick the Materials Shortage Problem!

ACME DRILLING & FISHING TOOLS

A product which will reduce wear and tear will not only soon pay for itself and protect profits but — *most important* — it will help relieve TODAY'S material shortage emergency. Acme's MUD COLLAR, the "modern-marvel" tool for rotary drilling, will do just THAT. And here are some definitely proven reasons why:

In any formation: It lessens drill pipe torque; assures faster, easier cutting, longer runs, fewer "green bits" and makes better hole . . . Its 6 high-velocity fluid streams keep cutters clean, bit bearings "lubricated" and free of cuttings — while constantly flushing bottom . . . In sticky formations, it also prevents mud rings and "balled up" bits.

Write NOW for full information about this "wonder tool"—that will help you decrease your material purchases by increasing the life of your bits and drill pipe.

Ask for Complete Catalog No. 12 — and Valuable Drillers' Manual.

Also makers of the Famous "Drill-mor" Line of Drilling and Fishing Tools for Cable Drillers—The World's Standard of Quality Since 1900

Defense comes FIRST—with most of Acme's facilities now devoted to "essential production." But we'll serve YOU as best we can . . . and "friendly - like."

The Acme Fishing Tool Co.
PARKERSBURG, WEST VIRGINIA
Export Office: 19 Rector St., New York, N. Y.

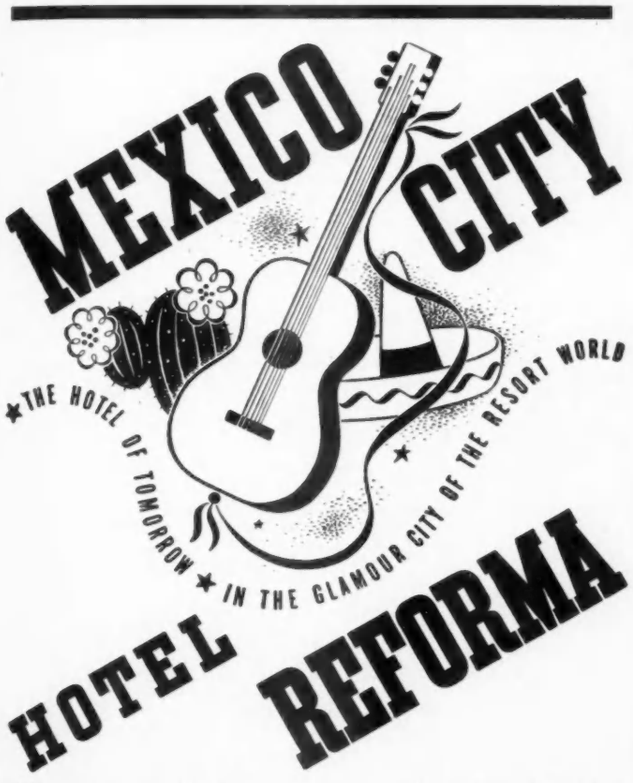
—AND BUY QUALITY MATERIALS

The use of quality materials is a good guarantee against unnecessary interruptions of top-speed production. That is why Garlock packings and gaskets are in use in so many factories today.

From past experience industry knows it can rely on Garlock quality for the long, dependable service so vital in today's war effort.

THE GARLOCK PACKING COMPANY
PALMYRA, NEW YORK
Tulsa, Okla. Houston, Texas
Los Angeles, Calif.

Garlock



All the glamour of Old Mexico, with many exciting sights and activities nearby—yet with every ultra-modern convenience and luxury! That's Hotel Reforma!! European plan rates. Famous for Mexican and American food. A. R. Pani, Managing Director; Antonio Perez, Resident Manager.

ECOLITE-92BM

With Locking Device and Seals

TWICE APPROVED FOR DOUBLE SAFETY

APPROVED BY U. S. BUREAU OF MINES & UNDERWRITERS' LABORATORIES

—for use in atmospheres containing Methane or natural gas, gasoline or petroleum vapors. This double-safety lantern has a tamper-proof reflector and cover with locking device and seals. Throws 1500 ft. beam. Instantly ejects broken bulbs from battery circuit. Large handle—360° pivoting feature gives direct illumination where needed and leaves both hands free for work.

Now at Supply Stores

ECONOMY ELECTRIC LANTERN CO.

3100 W. Cherry St. Milwaukee, Wis.

William M. Barret, Inc.

Consulting Geophysicists

Specializing in Magnetic Surveys

Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.

GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

THE FORT WORTH LABORATORIES

Analysis of oil field brines, cores, gas, oil and minerals. Field gas testing. R. H. Fash, Vice President; Long Distance 138. 823½ Monroe Street, Fort Worth, Texas.

HOUSTON LABORATORIES

Analytical and Consulting Chemist
Podbielniak Gas Analysis
Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils
Long Distance 267, Box 132, Houston, Tex.

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Of The Oil Industry

Up-to-Date—Guaranteed

OIL INDUSTRY MAILING LIST CO.

Tulsa Loan Bldg. Tulsa, Okla.

The Personality Hotels

in Texas

DALLAS
THE WHITE-PLAZA
300 Rooms
Jack Chaney, Mgr.

CORPUS CHRISTI
THE PLAZA
200 Rooms
Earl Wolford, Mgr.

SAN ANTONIO
THE WHITE-PLAZA
200 Rooms
Jack DeForrest, Mgr.

WHITE-PLAZA HOTELS

JACK WHITE, Operator

ian's Mannausau 1, s½ sw nw 4-13n-4w, Dundee lime 3751 ft, water 3761 ft, abnd 3765 ft.

Lake County: Failure—C. L. Maguire's Ne-Bo-Shone 1, sw ne se 30-20n-11w, abnd 1303 ft.

Lake County: Failure—Ohio's Consumers 1, n½ ne se 36-19n-12w, abnd 3750 ft.

Newaygo County: Failure—Voorhees Drilling Co.'s Kilts 1, se se sw 10-11n-13w, abnd 3410 ft.

MICHIGAN WILDCAT STARTS

Kalamazoo County — Muskegon Dev. Co.'s Boekeloo 1, c sw se 8-3s-10w, rig.

Lake County — Cities Service's Plack 1, sw nw ne 35-17n-11w, rig.

Montcalm County — American Production Co.'s Farnsworth 1, se nw se 10-11n-8w, rig.

Associated Pet. Co.'s Smid 1, c se se 13-12n-10w, lcn.

Oakland County—Fisher-McCall, Inc.'s Tireman 1, c se 32-2n-7e, rig.

Roscommon County—American Drilling Co.'s State V1, n½ nw nw 22-22n-2w, dr.

Van Buren County — Muter Oil Co.'s Stromayer 1, sw nw nw 15-2s-15w, lcn.

Eastern States

NEW YORK

Allegany County — Liberty Share Corp., Macken farm, Bolivar, 8 bbls, Richburg, 1420 ft.

Gadsby & Richardson No. 3, Gadsby farm, Bolivar, 7 bbls, Richburg, 1532 ft.

South Bolivar Oil Co., McKelvey farm, Bolivar, 9 bbls, Richburg, 1345 ft.

Wilbart Oil Co., McDermott farm, Bolivar, 9 bbls, Richburg, 1366 ft.

Star Oil Co., Neff farm, Wirt, 10 bbls, Richburg, 1380 ft.

McEnroe & Randall, Pike farm, Alma, 10 bbls, Richburg, 1436 ft.

Bradley Prod. Corp., Crandall farm, Alma, 8 bbls, Richburg, 1365 ft.

Bradley Bros., Inc., Sawyer farm, Bolivar, 7 bbls, Richburg, 1432 ft.

Bradley Bros., Inc., Sawyer farm, 5 bbls, Richburg, 1374 ft.

Bradley Bros., Inc., Sawyer farm, 5 bbls, Richburg, 1388 ft.

H. H. Patterson, Browning farm, Scio, 9 bbls, Scio, 853 ft.

H. H. Patterson, Black farm, Scio, 10 bbls, Scio, 936 ft.

L. H. Thornton et al, Fassett farm, Willing, Fords Brook, 7 bbls, 1277 ft.

Max Andrews, Burdick farm, Wirt, 8 bbls, Richburg, 1380 ft.

Cam Oil Co., Peavy farm, Genesee, 6 bbls, Richburg, 1417 ft.

INTAKE WELLS

Allegany County—Ebenezer Oil Co., Herrick farm, Alma, Richburg, 1352 ft.

South Bolivar Oil Co., McKelvey farm, Bolivar, Richburg, 1325 ft.

Ebenezer Oil Co., Vincent farm, Scio, Richburg, 1370 ft.

Messer Oil Co., "M," Russell farm, Alma, Richburg, 1379 ft.

Bradley Prod. Corp., Russell farm, Alma, Richburg, 1364 ft.

Bradley Prod. Corp., Russell farm, Alma, Richburg, 1408 ft.

Otaquago Co., Pike farm, Alma, Richburg, 1429 ft.

Hanson & Ehret, Gordon farm, Scio, Richburg, 1053 ft.

J. P. Herrick No. 1, Howe farm, Bolivar, Richburg, 1427 ft.

L. H. Thornton et al, Fassett farm, Willing, Fords Brook, 1255 ft.

A. C. Shaner Oil Co., Hammond farm, Clarksville, Clarksville, 1344 ft.

I. & H. Oil Co., Peterson farm, Wirt, Nile, 1377 ft.

OHIO COMPLETIONS

Athens County—Nuzum Brothers' Shea 1, 3 bbls, 1706 ft.

Belmont County—Frank Stranges' Shepherd 1, abnd 1770 ft.

Coshocton County—Dunn Mar Oil & Gas' McKee 1, 10 bbls, 3051 ft.

Knox County—H. E. Perkins' Young 1, 0.2 gas, 2418 ft.

Licking County—Allen Willey et al's Fee 1, abnd 2695 ft.

Mahoning County—Tri-County Oil & Gas Co.'s Schroeder 2, 2 bbls, 630 ft.

Medina County—William Dempsey's Ritz 1, 75 bbls, and 0.75 gas, 3282 ft.

Meigs County—Ohio Fuel's King 2, 0.04 gas, 1542 ft.

Ohio Fuel's Saxton 1, abnd 1638 ft.

Monroe County—Quarry Oil & Gas Co.'s Platt 1, 0.04 gas, 2160 ft.

Morgan County—Bern Oil & Gas' Bowman 2, abnd 987 ft.

Muskingum County—Industrial Gas Corp.'s Dilley 1, 0.45 gas, 4124 ft.

Noble County—Henry Clymer's Roach 1, 0.03 gas, 1537 ft.

S. E. Ruby's Bates 2, 0.05 gas, 1704 ft.

Perry County — Preston Oil's Shaw 5, 45 bbls, 3311 ft.

Palm Oil et al's Cooper 2, 45 bbls, 2735 ft.

Washington County—Newport Oil Co.'s Adkins 27, 1 bbl, 470 ft.

Wayne County—W. A. Clark's Stair 1, 2.45 gas, 3181 ft.

PENNSYLVANIA COMPLETIONS

Armstrong County — Peoples Natural Gas Co.'s Schreckengost 1, 0.06 gas, 2444 ft.

Fayette County—Duquesne Gas Co.'s Hillen 1, abnd 2601 ft.

Greene County—Equitable Gas Co.'s Keenan 1, 0.07 gas, 3142 ft.

Washington County — John M. McIntosh's Huniski & Pollock 2, 1 bbl, 1265 ft.

WEST VIRGINIA COMPLETIONS

Braxton County—Pittsburgh & W. Va. Co.'s Ban Buren 7882, 0.06 gas, 2031 ft.

Calhoun County—Connolly & Weaver's McDonald 1, 15 bbls, 2021 ft.

Clay County—Virginia Gasoline & Oil Corp.'s Brown, Swann & Goshorn 1323, 3 bbls, 1842 ft.

Jackson County — Columbian Carbon Co.'s Johnson 1, 4.78 gas, 5063 ft.

Godfrey L. Cabot's McLean heirs 17, 8.3 gas, 5208 ft.

Godfrey L. Cabot's Winters 1, 0.4 gas, 5182 ft.

Columbian Carbon Co.'s Harmon 1, 12.33 gas, 5209 ft.

Shale Gas Co.'s Good 1, 1.35 gas, 5137 ft.

Kanawha County—Godfrey L. Cabot's Poca Coal Land Co. 6, 4.5 gas, 5166 ft.

Putnam County—Teavee Oil & Gas Co.'s Forth & Ervin 1, abnd 2129 ft.

Roane County—B. F. Wright's Bailey 1, abnd 1842 ft.

Upshur County—Pittsburgh & W. Va. Gas Co.'s Reppert 7878, 0.28 gas, 4619 ft.

WEST VIRGINIA WELL DRILLED DEEPER

Ritchie County—W. H. Bickel's Welch 1, 0.9 gas, 1860 ft.

TOP YOUR TREE

with a forged steel UNIBOLT Coupling and blanking plug—you'll speed up the taking of bottom hole pressures, running paraffin scrapers, bottom hole chokes, etc.

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THORNHILL-CRAVER COMPANY

HOUSTON

UNIBOLT

THE ONE BOLT COUPLING

PIONEERS IN Well Servicing

Patented Portable Derricks and Rigs

With Our Patented Portable Derrick we arrive at your well with complete rig and derrick, ready to service it in the most efficient and economical manner. Our complete portable equipment and experienced personnel assures satisfactory reworking; also tubing pulling, swabbing and bailing.

DAY AND NIGHT SERVICE

You furnish the well . . . Let us do the rest

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Men in the Industry's News

MARTIN NEILSEN, for the past several years refinery superintendent for Gas and Oil Products, Limited, in Turner Valley, has been appointed plant superintendent for Abasand Oils Limited, with headquarters at Fort McMurray, Alberta. Neilsen will be in immediate charge of Abasand's production from the Athabaska oil sands, including mining, extraction of the oil from the sands, and refining. His technical and engineering education was obtained in Denmark and Norway and he has been in the oil business in Canada since 1930. He is a member of the Alberta Association of Professional Engineers.

JACK BAUMEL of Austin, Texas, has been appointed a member of the research and coordinating committee of the Interstate Oil Compact Commission. Baumel, chief petroleum engineer and director of production for the Texas Railroad Commission, replaces Dr. F. V. L. Patten of Austin who recently resigned as chief supervisor of oil and gas in Texas and chairman of the Compact Committee to become assistant director of the OPC Division of Reserves.

ALDEN W. FOSTER has closed his office in Pittsburgh, Pennsylvania, as consulting engineer for the duration and has enlisted in the Army Air Forces. He has received an appointment as captain in the Ferry Command and reported for duty August 13. His home address is Sewickley, Pennsylvania.

C. E. BUCHNER, JR., has been promoted from district representative at Houston to district manager in charge of Kobe, Incorporated's newly created Gulf Coast district; and W. C. Gilmore has been advanced from the managership of the Panhandle district to the East Texas district.

Gilmore, after completing his studies at Cameron Junior College at Lawton, Oklahoma, in 1934, joined Lone Star Gas Company; and, later, Slick-Urschel Oil Company where he was in charge of that company's pumping operations at Oklahoma City. He joined Kobe in 1937. Since that time he has had experience with hydraulic pumping in practically all fields in Oklahoma, the Texas Panhandle and North Texas. Prior to his recent promotion as manager of the East Texas district, he was in charge of Kobe operations in North Texas.

After graduating from the School of Engineering at Tulsa University, Buchner was for a number of years involved in pumping problems in Oklahoma, Kansas, and particularly the Gulf Coast. He joined Kobe in 1941 as district representative at Houston, which position he has held until his recent promotion to the managership of the Gulf Coast district.

C. E. BUCHNER, JR.

W. C. GILMORE

ALAN J. RUTHVEN MURRAY, managing director of Kern Trinidad Oilfields, Ltd., of Trinidad, is visiting in the United States.

JOHN A. McCUTCHIN, British American Oil Producing Company, Tulsa, has been elected chairman of the Mid-Continent section of A.I.M.E. He succeeds H. F. Beardmore, Amerada Petroleum Corporation. Other officers are D. G. Hawthorn, Amerada Petroleum Corporation; R. G. Hamilton, Schlumberger Well Surveying Corporation, and W. L. Kendall, First National Bank & Trust Company.

H. A. ECKLUND has been appointed head of the land department of British American Oil Producing Company. Ecklund formerly was in charge of the department in the Texas Gulf Coast.

JOHN G. BENEDICT, president of Landis Machine Company, died in Waynesboro, Pennsylvania, August 4, after an illness of two years.

E. F. PFLUGER, The National Supply Company, Tulsa, has been transferred to the engineering department of the Superior Gas Engine division of the company at Springfield, Ohio.

RICHARD W. FEAGAN, on leave of absence from Stanolind Oil & Gas Company to finish a degree in petroleum engineering at the University of Texas, is now at Cornell University. Feagan, an ensign in the Naval Reserve, was called to active service immediately upon completion of his degree at Texas. He was first sent to the Navy Yard at Charleston, S. C., and later ordered to Cornell University to study diesel engineering.

J. B. CHAMBERS has been placed in charge of enlarged regional offices of Cummins Engine Company at Fort Worth, Texas. Formerly located in the Mid-Continent Building, the company has taken larger quarters at 1812 Fair Building, where Chambers will be in a position to facilitate the handling of all sales and service matters through the distributors, the Mid-Continent Supply Company and the Cummins Diesel Sales and Service Company, Inc.

Chambers was appointed regional manager at Fort Worth in 1935. Affiliated with the Cummins Company since 1925, he got his diesel training in various capacities at the Cummins factory, starting as apprentice machinist. Transferred to service maintenance in 1928, he acted as test block foreman, and was later sent to the East Coast, where he supervised the installation of marine engines

DIESEL Engine Manufacturers Acquaint New Customers with

Attached to every engine shipped is a tag envelope reading: "This envelope contains Two Sand-Banum Special Tablets. Use them in your engine radiator to keep scale and corrosion from forming . . . also removes old scale and corrosion with absolute safety."

SAND-BANUM SPECIAL
Trade Mark

This endorsement of Sand-Banum Special by such manufacturers indicates its superiority. Based on the same principles as Sand-Banum Standard for boilers, and Blue Seal Emulsion Sand-Banum for engines. Send for complete details.

AMERICAN SAND-BANUM COMPANY, Inc.
9 Rockefeller Plaza New York City

FILTRATION
Systems and Service

Efficient, economical filtration systems for salt water disposal or feed water purification. Standard filtration methods are intelligently applied to assure proper coagulation and crystal clear effluent.
Fast Deliveries — Dependable Service

GULF ENGINEERING CO., INC.
"Service, Not Promises"
307 M. & M. BUILDING HOUSTON, TEXAS
916 S. PETERS STREET NEW ORLEANS, LA.

"Mud-O-Graf"
LOWER MUD COSTS AND BLOWOUT PROTECTION

QUOTING AN ENGINEER:
It is reasonable to believe, with some of the advantages pointed out, that on wells where the "Mud-O-Graf" has been in operation, we have used a lighter drilling fluid than was used on previous wells drilled in the same area.

WARREN AUTOMATIC TOOL CO.
2104 LEELAND AVE • HOUSTON

and auxiliary generating sets. He returned to the factory in 1930 as experimental engineer—running laboratory tests, and building experimental trucks, buses and race cars.

In 1935 Chambers was chosen as Cummins representative in the petroleum territory where he is responsible for all Cummins activities.

JOSEPH E. MOORHEAD, prominent Pennsylvania oil man and executive manager of the Pennsylvania Grade Crude Oil Association, died in Emergency Hospital, Washington, August 9. Funeral was held August 12 at Oil City, Pennsylvania. A native of Arkansas, Moorhead spent the greater part of his life in other states, but had lived in Oil City for the past nine years. He is survived by his widow, two sons and two daughters.

JOHN H. BAIRD of New York City has been appointed exclusive export representative for Unit Rig & Equipment Company. Baird entered the supply business through employment with Oil Well Supply Company in 1914 in Wyoming. He later was employed by Ohio Oil Company and afterwards returned again to Oil Well Supply Company, serving in various capacities in Montana, Pennsylvania, and New York. He joined Byron Jackson Company in 1929 to handle oil tool division exports. Subsequently he acquired the export representation for American Iron & Machine Works Company, Security Engineering Company, and International Cementers, Inc. He assisted in the organization of the New York Chapter of Nomads and was elected first president and member of the national board of regents.

CARLTON D. SPEED, JR., head of Speed Oil Company, Houston, has been called to Washington where he will serve as a petroleum technologist with OPC. Speed is president of the Houston Geological Society.

DWIGHT C. ROBERTS, regional manager of the Houston office of Sperry-Sun Well Surveying Company, Philadelphia, has been promoted to assistant general manager, the company announced recently. Roberts will maintain his headquarters with the Houston office. The new setup was effective August 1.

Squeaks from the Bull Wheel

No Oil Shortage Here

"This lady says you tried to speak to her at the station!"

"It was all a mistake, your honor. I was looking for my roommate's girl, whom I had never seen before, but who had been described to me as a vivacious blonde with classic features, beautiful complexion, perfect figure, smartly dressed and—"

"I don't care to prosecute the gentleman. Anyone might have made the same mistake."

Magician

"What do you think of a man who constantly deceives his wife?"

"I think he's a wonder."

Habit

"You know, I think that recruit used to be a bookkeeper."

"Why?"

"Well, every time he stands at ease he tries to put his rifle behind his ear."

Sign

"The war'll be over in six weeks."

"What makes you think that?"

"Well the army took my brother this week and he never in his life held a job longer than six weeks."

Duty First

Maiden Aunt: "And what brought you to town, Henry?"

Henry: "Oh, well, I jus' come to see the sights, and I thought that I'd call on you first."

Might Help

Cafe Manager to Waitresses: "Now girls, look your very best today. Put a bit more rouge on your cheeks, and take a bit more trouble with your hair."

Head Waitress: "Are you expecting someone special?"

"No. The beef's tough."

Soft Answer

"Whenever a boring man asks me where I live, I always say I live in the suburbs."

"And where do you live?"

"In the suburbs."

Age

"Then your husband, I take it, is elderly."

"Elderly! Why, he's so old he gets winded playing chess."

Truthful Report

It was 2 a.m. when the club telephone rang, and a bachelor member answered it.

"Is my husband there?" demanded an angry feminine voice.

"No, he's gone home," was the reply.

"How do you know?" snapped the voice. "I didn't even tell you his name."

"You didn't need to," was the retort. "When this phone rang every darned married man in the place grabbed his hat and ducked out."

Add Town Names

The conductor and a brakeman on a Montana railroad differ as to the proper pronunciation of the name Eurelia. Passengers are often startled upon arrival at this station to hear the conductor yell:

"You're a liar! You're a liar!"

Then from the brakeman at the other end comes the cry:

"You really are! You really are!"

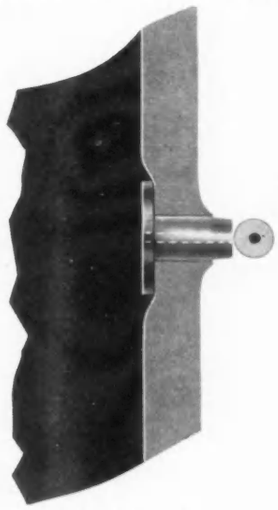
Gotkool
WATER CANS
& COOLERS
Gott
GOTT Water Cans are the practical way to keep drinking water cool for long periods, protected from impurities and always handy to the job. Snug fitting large removable top, strongly built to withstand rough usage.
GOTT Water Coolers have extra large covers and a handy non-leaking push button faucet. Your Supply Store has them, get one today! . . . . . .
GOTKOOL WATER COOLER
Made in 2, 3, 5, 8, 10, 15 and 20 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

Notes for the Equipment Buyer and User

Orifice Button

M. M. KINLEY COMPANY

M. M. Kinley Company, Houston, has announced the Kinley orifice button, designed to control the size of holes in tubing for gas lifting. These buttons can be placed in the tubing without removing the tubing. The buttons are made of hardened steel and are punched



Kenley Orifice Button

into the tubing by a mechanical gun, run into the hole on a Halliburton line. If tubing becomes sanded up, a larger hole can be punched into the tubing to circulate mud in killing the well. The holes in buttons range in size from 1/64- to 1/8-inch.

Clutch

UNIT RIG & EQUIPMENT COMPANY

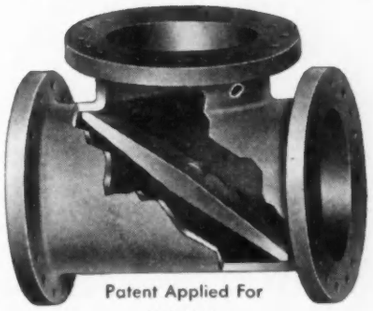
Unit Rig & Equipment Company, Tulsa, has announced the Air-O-Matic clutch. Unusually simple in design and rugged in construction, this clutch was designed to eliminate surplus parts and simplify adjustments. The clutch is of the direct air-actuated type and is not to be confused with air-controlled type clutches.

A unique self-induced air system is employed for cooling the springs and floating or center plates as well as keeping all friction surfaces clean, the latter occurring when clutch is disengaging. High-pressure air operates the piston which is the only actuating part. It flows through the air gland and through a hollow shaft to the cylinder formed by the floating piston and cylinder head. The piston moves into contact with the first friction face and in turn puts equal pressure on all the driving elements. This high-pressure air is regulated by any one of several different types of control valves, depending upon the desired results, it being readily understood that quick engagement or a slow engagement can be secured. In all cases the engagements are never severe regardless of the time element. Torque can be regulated on the clutch simply by regulating the pressure of air used. This is done by a regulating control valve. This clutch has been used for hoisting, driving the rotary table where torque was definitely controlled, driving the slush pumps and connecting drilling engines to the driving system of a four-wheel drive truck. These varying operations indicate its wide range of adaptability. An important advantage of this clutch, as used in drilling equipment, is the fact that all equipment driven by the clutch is greatly favored—there are no shocks.

Valves

R-S PRODUCTS CORPORATION

R-S Products Corporation, Philadelphia, has announced a three-way valve of the butterfly type which provides unusually quick action when placed in use. It is designed for mixing and quick interchange service and adapted to fully



Patent Applied For
R-S Valve

automatic control by means of an air diaphragm motor or hydraulic cylinder.

The valve is constructed of cast steel or cast iron for pressures up to 600 p.s.i. When desirable, special metals for resistance against heat, abrasion and corrosion can be substituted with a consequential saving in cost.

A special feature of the valve is the self-cleaning, double-beveled, streamlined vane. It seats wedge-tight against the body of the valve thus producing a tight shut-off as well as positive control of volume and pressure.

For inaccessible locations, a reach rod with de-clutching unit is provided for automatic operation or manual control in case of power failure.

Cameron Iron Works Awarded

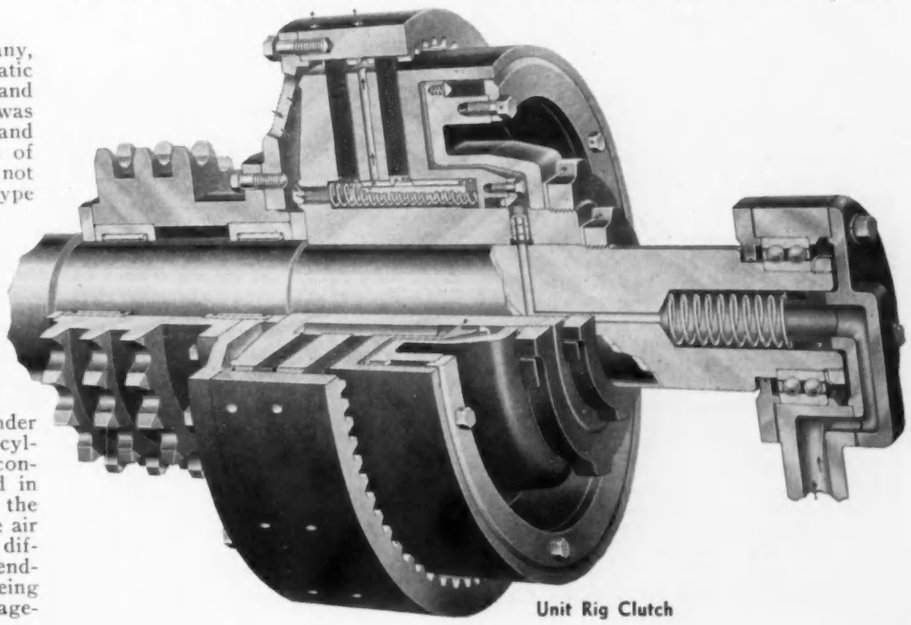
Cameron Iron Works, Inc., Houston, has been awarded the all-Navy "E" burgee with white star, signifying outstanding production of naval ordnance. Formal presentation of the award was made by Rear Admiral P. W. Foote at a ceremony which also celebrated the dedication of the company's new Houston plant.

Casing Bushings

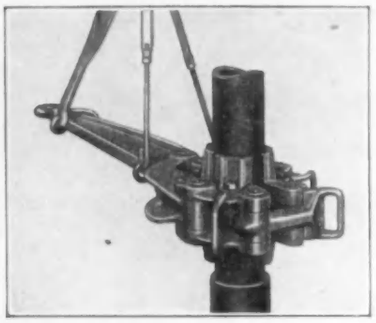
BYRON JACKSON COMPANY

Byron Jackson Company, Houston, Los Angeles, or New York, has announced development of BJ drill casing bushings which have proved successful for making up or breaking out drill casing.

When casing is used for the drilling string a special type of tong is required, particularly to break out tight joints of the comparatively thin-walled casing. These drill casing bushings are fur-



Unit Rig Clutch



Byron Jackson Bushing

nished with a 12-inch bearing surface, and are bored to contact the entire circumference of the casing. Two of the four bushings are equipped with die slots into which are fitted three 4-inch knurled BJ long dies bored to the diameter of the casing upon which they are to be used.

In service these new drill casing bushings break out the tightest joints without crimping or bottlenecking the casing, even after repeated round trips of the drill casing.

Another successful use of these bushings is for setting any type of thin-walled casing, or for removing corroded casing which has been in the well for a long period.

Lighting Fixture

CENTURY LIGHTING, INC.

Century Lighting, Inc., 419 West 55th Street, New York City, has announced a flame-proof fluorescent lighting fixture of moulded asbestos. This substitute for steel lighting fixtures, the "Asbestolite," is designed for use in plants where complete fire resistance is required.

Safety Aid

E. D. Bullard Company, 275 Eighth Street, San Francisco, has issued a vest-pocket-size, thumb-indexed civilian defense index, complete with blackout instructions, how to fight bombs, precautions to take against gas attacks, and complete first-aid instructions. Much of the first aid information may be applied to every day industrial accident problems.

Rubber Conservation

The B. F. Goodrich Company, Akron, Ohio, has issued a catalog section on belt vulcanizers, one of the most important adjuncts to rubber belt conservation, and may be obtained free upon request.

The catalog section gives all pertinent details on the type of construction of its vulcanizers, dimensions, capacity, and the type of current necessary to operate them. A full page is devoted to a table giving all this information in condensed form. The catalog section also describes splicing tools used with the vulcanizers and splicing materials.

Many industrial executives have already achieved substantial belt salvage through use of the vulcanizers, and as the rubber shortage becomes even more acute in industry the necessity for making the most of every foot of belt in the plant will become increasingly important.

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